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Copyright (c) 1993 - 2004 Compugen Ltd.
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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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61 CTGCTGCTGCTGCTGCTGCTGTTTTGGAGTGGGGGCTCGGTGGCGGTGCCAGAAA 120 61 CTGCTGCTGCTGCTGCTGCTTTTGGAGTGGGGGGTGCCTGGTGGCCCAGAAA 120 62	SOURCE SOURCE Homo sepiens CHARLY Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo REFRENCE AUTHORS FATTARA, N. Stewart, T. A., Milliams, P. M.; Baker, K. P., Desnoyers, L., Godowski, P. J., Gurney, A.L.; Smith, V.; Tumas, D., Wood, M. I., Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Paoni, N. F., Roy, M. A. and Waranabe, C. K. Grimald, C.J., Hillan, K. J.; Bool, M. J. Bool, M. J. J. Bernteen Inc. (195) FRATURES Location/Qualifiers Genentech Inc. (195) FRATURES 1494 Organism="Homo sapiens" And Liyee="unassigned Dha" And Liyee="unassigned Dha" And Chille Hill
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 2673)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Schemen, C.M., Schuler, G.B.,
Altschul, S.F., Baetry, Buttow, K.H., Schaffer, C.F., Bhat, N.K.,
Hopkins, R.P., Jordan, H., Moore, T., Mans, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Schetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McSwan, P.J.,
McKernan, K.J., Malek, J.A., Gunatane, P.H., Richards, S.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Gay, L.J., Lu, X., Gibbs, R.A.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenky, Y.,
Butterfield, Y.S., Krzywinski, M., Skalska, U., Sanailus, D.E.,
Schnerch, A., Schein, J.B., Jones, S.J. and Marra, M.B.
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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1. (Dasas 1 to 495)

S. Clark, H.F., Gurney, A.L., Abaya, E., Baker, K., Baldwin, D., Brush, J., Chen, J., Chow, B., Chui, C., Crowley, C., Currell, B., Deuel, B., Dowd, P., Baton, D., Foster, J., Grimaldi, C., Gu, G., Hass, P. E., Heldens, S., Huang, A., Kim, H.S., Klimowski, L., Jin, Y., Johnson, S., Lee, J., Lewis, L., Liank, B.L., Singh, J., Seshagiri, S., Simmons, L., Singh, J., Sanchez, C., Stinson, J., Vagts, A., Vils, W. Watanabe, C., Wieand, D., Woods, K., Xie, M. H., Yansura, D., Yi, S., Yu, G., Yuan, J., Zhang, M., Zhang, Z., The Secreted Protein Discovery Initiative (SPDI), a Large-Scale Bifort to Identify Novel Human Secreted and Transmembrane Proteins:
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CA 94080, USA
                                          181 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCCCCGTGGGGAAGGG
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Inc., 1 DNA Way, South San Francisco,
Location/Qualifiers
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/locus_tag="UNQ471"
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/note="PRO831"
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Direct Submission
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AY358657
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PRI 07-OCT-2003

OY 241 GAGAAAGTGGGGGATGGCTAAGA Db 2428 GAGAAAGTGGGGGATGCTAAGA OY 301 GGCTAGGGGGCTGCCTTATTA Db 2488 GGCTAGGGGGCTGCCTTATTTA OY 361 AGATATTAAGGCCCTGTTCATTA Db 2548 AGATATTAAGGCCCTGTTCATTA OY 421 AGATTGTTCATTA	2608 5 4/c AR ION Se ON AR	VERSILYON ARZILYO4.1 GI:21515097 KEYWORDS . CINKnown. ORGANISM Unknown. ORGANISM Unclassified. Unclassified. AUTHORS I (bases 1 to 50000) AUTHORS Ryan,J.W. and Sprinkle,T. TITLE Human aminopeptidase P ge JOURNAL Patent: US 6399349-A 4 04 FEATURES Location/Qualifi SOURCE //Organism="unkno/Noriginass"	Query Match Best Local Similarity 100.0%; Pr Matches 467; Conservative 0;	Oy 1 CAAIGITTGCCTATCCACCTCCC	Db 1458 CTGCTGCTGCTGCTGCTTGAAGG Qy 121 GTCTCTTCTGCCACTGACGCCCC Db 1398 GTCTCTTCTGCCACTGACGCCCC	Qy 181 TGTCTCCTGCCTCATCGGCCTGC 	QY 241 GAGAAAGTGGGGGATGGCTAAGAI 	301 GGCTAGGGGGGGCTGCCTTAITTAI 	QY 361 AGATATTAAGGCCCTGTTCATTAI Db 1158 AGATATTAAGGCCCTGTTCATTAI	Oy 421 AGAITGITCTGIGTAAATAIGIC
TITLE Direct Submission JOURNAL Submitted (03-JAN-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA NIH-MGC Project URL: http://mgc.nci.nih.gov COMMENT GOTTACL: MGC help desk Email: cgapbe-r@mail.nih.gov Tissue Procurement: DCTD/DTP CDNA Library Preparation: Rubin Laboratory CONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Genome Sequence Centre, SC Cancer. Agency, Vancouver, BC, Canada	Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guln, Letticia Hsiao, Martin Krzywinski, Rera Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Maranada Teal, Natasja van den Bosch, Jill Vardy, George Yang, Scott Zuyderduyn, Marco Marra.	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 40 Row: f Column: 18 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21314667. FEATURES 1. 2673 And Lype="mRNA" Ab XrdE="mRNA" Ab XrdE="mRNA" Ab XrdE="mRNA" (clone="MGC:31846 IMAGE:4586949" (tissue type="Kidhey, renal cell adenocarcinoma" (clone="MGC:31846 IMAGE:4586949") (clone="MGC:31846 IMAGE:4586949")	gene //acte="Vector: pOTB7" 1 2673 /gene="APLN" /db xref="LocusID: 8862"	/db_xref="MIM:300297" CDS	/ dD_xref="G1:1808894" / db_xref="LocusD1:8862" / translation="MANTWCESEGGENGGENEVGENSAASGPASPIRDPCLSEAGL KGPPSAHPRRLCLLHRLVCFSGGLTSIQLSPRTCCSHQWAQLFSPACFPQWRAPGCSL DDSRSLTRIRPVHLPGPSLD"	Query Match Dest Local Similarity 100.0%; Score 467; DB 9; Length 2673; Best Local Similarity 100.0%; Pred. No. 5.7e-113; Matches 467; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	27 I CAATGITIGCCTAICCACGCCCCAAGCCCCTTTACCTAIGCTGCTACACGCTGCTG 60	61 CT 2248 CT	121 2308	Qy 181 TGTCTCCTGCCTCATGGCCTGCCATGACCTGCAAGCCCCAGGCCCGTGGGGAAGGG 240 Db 2368 TGTCTCCTGCTCATCGGCCTGCCATGACCTGCAAGCCCAAGCCCCGTGGGGAAGGG 2427

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SARAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGTG 300
                                                      TAPAGTGGTTGTTTATGATTCTTATACTAATTTATACAA 360
                                                                                                                                  TAAGAAATTGTTCCCTTGCCTGTGTTCAATGTTTGTAA 2607
                                                                                                                                                                                                                                                                            linear PAT 20-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RECTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAA 120
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                                                                                                                AAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAA 420
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGIGGTTGTTTATGATTCTTATACTAATTTATACAA 1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAAITGITCCCTICCCCTGTGTTCAAIGITTGTAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGTG 300
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vred. No. 6.4e-113;
Mismatches 0; Indels 0; Gaps
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04-JUN-2002;
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ssigned DNA"
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JS 6399349.
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ISNNGQVPCHFSFIPKLNDSQYCKPMLRAEPFEGYLEPNETVDISLDVYVSKDGVFUL
NSGBDKIEDDLIVUHLDNGKDYPRINISGNYLDSCFGYSLEADCRMKRAFREVPYKLID
LEEDSFLEKEKSLLQWYPLDGRASERPLQVPKEIMLIVDHIRKYACHQEDLFQTFGWO
EELQQIIDCLDTSIPETIPGSNHSVARALLIFLERALPEPVICYELYQRCLDSAYDPRI
CROVISQLERCHRWYRYLMAFIRELLKFSEYNSVNANMIATLFTSLLIREPPNLMAR
QTSDRQRAIGFLLGFELGSED
3992. 4093,4651. 4735,5826. 5942,6041. 6228,9214. 3325,
10696. 110805,12706. 12841,18582. 18692,19339. 19504,
19759. 13998,33588. 33712)
                   match: cDNAs: Em:AA368192 Em:D57627 Em:AA515789
match: ESTS: Em:AA368192 Em:AA704671 Em:AA515789
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Em:AA0444611 Em:AA1868493 Em:AA743649 Em:AA836673 Em:R67320
Em:AA100629 Em:AA0885500 Em:R94403 Em:AA636678 Em:AA034375
Em:AA142870 Em:AA58871 Em:R94251 Em:AA4056506 Em:AA034375
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Em:AA042666 Em:AA740555 Em:R18793 Em:AA644084 Em:AA904845
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Em:AA169401 Em:AA68849 Em:N46002 Em:R045373 Em:H87857
Em:W52373 Em:AA587050 Em:AA6100630 Em:R98688 Em:H8787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
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19759. .19994,27786. .27809,30444. .30560,31621. .31705,
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RFFVGTWNNQQSDSGLEEWLNCDPWPPDIYCIGFQELDLSTEAFFYFESVYGGEW
MAVERGLHSKAKYKKVQLVRLVGPMLLIFARKDQCRYIRDIATETVGTGIMGKMGNKG
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EVVIWLGDLNYRLCMEDANEVKSLINKKDLQRLLKFDQLNIQRTQKKAFVDFNEGEIK
FIPTYKYDSKTDRWDSSGKCRVPAMCDRILWRGTNVNQLNYRSHMELKTSDHKPVSAL
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NSGEDKIEDILVLHLDRGKDYFLTISGNYLPSCFGTSLEALCRWRREIREVPTKLID
LEKSLLQWVPLDEGASERPLQVPKEIILAULVDHLFKYACHQEDLFQTPGMQEELQQIID
CLDTSIPETIPGSNHSVAENLLIFLEALPEPVICKELYQRCLDSAYDPRICKQVISQL
PRCHRNVFRYLMAFILELLKFSEYNSVNANMIATLFTSLLLRPPPNLMARQTPSDRQR
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FREVGTWNUNQSPBGGLEBPLINCDPREPDITUGITGGEBLILESTBAFFYEFSVESUKEGBWS 
MAVERGLISKAKYKYCYQLIVALVGAMLLIFARKDQCRYTRDIATETOTIGIMGKGUNG 
GVAVREVFHNTTFCIVWSHLAAHVEDFERRNQDYKDICARMSFVVPNOTLPQLNIMKH 
BYVYILGIBLAYRLCMPDANBYKSLINKKOLQRLIKFPQLNIQPROKAPOTREBEIK 
FIPTYKYOSKUTDRM9SGKCRYPAMODRIJMRGTHYNNQLNYRSHMELKTSDHFVSSAL 
FILDYKYCOSKUTDRM9SGKCRYPAMODRIJMRGTHYNNQLNYRSHMELKTSDHFVSSAL 
FILDYKVVDERRYRKVFEDSVRIMDRMENDFLPSLELSRREFVFENVKFRQLQKEKFQ
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EQKDSSSWYQKLDTKDKPSVFSGLLGFEDNFSSMNLDKKINSQNQPTGIHREPPPPPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidemce=not_experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2642. .2940
/note="Alub repeat: matches 1. .302 of consensus"
6639. .6933
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/note="MIR repeat: matches 2. .262 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not experimental
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/db_xref="GI:3171882"
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'note="variant 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one Mil subclone; and the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, FMBL; Sw:, SWISSRROT; Tr:, TREMBL; Wp:, WORNPEP; Information on the WORNPEP database can be found at the work anger ac.uk/Projects/C elegans/wormpep This sequence was generated from part of bacterial clone conties of human was generated from part of bacterial clone conties of human was generated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   join(<767. .877,1303. .1392,2075. .2195,2282. .2443,
3992. .4003,4621. .4735,5826. .5942,6041. .6228,9214. .9325,
10696. .10805,12706. .12841,18582. .18692,19339. .19504,
197759. .19994,30444. .30560,31621. .31705,3228. .32455,
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                                                                                                          PRI 05-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations
                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 151152)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="dJ454M7.1.1 (Lowe Oculocerebrorenal Syndrome)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (05-JUN-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 18A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Jun 2, 1998 this sequence version replaced gi:2969945.
                                                                  HS454M7 151152 bp DNA linear PRI 05-JUN-2 fuman DNA sequence from clone RP3-454M7 on chromosome Xq25-26.3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence is the entire insert of clone RP3-454M7 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
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/db_xref="RZPD:RPCIP704M07454"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center: Wellcome Trust Sanger Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center code: SC
Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:9606"
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/clone_lib="RPCI-3"
767. .35998
/gene="OCRL1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---- Genome Center
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                                                                                                                                                                                                                                                   AL022162.1 GI:3171881
                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pavitt, R
                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
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mRNA

FEATURES

144189144453 /gene."XNPBE2." join(144454144502,1473481 150445150508,151478151582 152849152995,155710155811 157392157587,15840118490	5'UTR CDS	89658 CTGCTGCTGCTGCTGAGGCTCATGCTTGGAGTTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG
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/mol_type="genomic DNA" /db_xref="taxon:9606" 144189.176791 /gene="xNPEP2"	депе	/note="27 copies 2 mer 2516825193 /note="13 copies 2 mer
Location/Qualifiers e 1206618 /organism="Homo sapiens"	ĽĊ	606 Sx repeat: matche
Sequence update by submitter On Mar 26, 2002 this sequence version re	REMARK COMMENT FFATTIPES	2289422965 /note="3 copies 24 mer 83% conserved"
Submitted (26-MAR-2002) Vascular Biology Georgia, 1120 15th Street, Augusta, GA 3	JOURNAL	/more="named repeat: matches 74777849 of consensus" repeat_region 2245022650 //note="WER46A repeat: matches 1 236 of consensus"
Evan, J.W., Jin, L., Horvath, I. and Sprink Direct Submission	AUTHORS	: matches 22188 of consensus"
Submitted (18-OCT-1999) Vascular Biology Georgia, 1120 15th Street, Augusta, GA	REFERENCE	/note="MIR repeat: matches 1. 2054320697
Ryan, J.W., Jin, L., Horvath, I. and Sprinb Direct Submission	AUTHORS TITLE	region
	REFERENCE	region
Kyan, J.W., Jin, L., Horvath, I. and Sprin! Human membrane-bound aminopeptidase P ge	AUTHORS	region
Cate	REFERENCE	/note="L1PA9 repeat: matches 54915829 of consensus" repeat_region 1828518620
Bukaryota, Metazoa, Chordata,	act move	/note="AluYb8 repeat: matches 1, .302 of consensus" repeat_region 1730217642
Ношо	SOURCE	<pre>/note="LIPA9 repeat: matches 58296163 of consensus" repeat_region 1700117301</pre>
Ariybyb3 AF195953.2 GI:19718557	VERSION VERSION VEVENDEDS	/note="MIR repeat: matches 52212 of consensus" repeat_region 1666717000
complete cds.	MOISSEDOR	/note="MER5B repeat: matches 29178 of consensus" repeat_region 1631716466
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89298 AGATTGTTGTGTAAATATGTCTTTATAATAACA	58 Qr	/note="MIR repeat: matches 12163 of consensus" repeat region 1479315073
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	œ	region
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CCAAGCCCAGCCCCGTGGGGAAGGG 89479
                                                                  AGGGAACAGAGGGGTAGTGGGTG 300
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CCAAGCCCAGCCCCGTGGGGAAGGG 240
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.ni; Hominidae; Homo.
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282,151837. .151923,
811,156987. .151968,
490,159714. .159823,
797,164422. .164482,
518,167248. .167307,
934,173533. .176791)
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2194 TAAAGATTGTTCTGTGTAAATATGTCTTTATAAAAAGAGAGTTAAAAGCTG
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VYTWKKAAVWTDSRYWTQAERQMDCNWELHKEVGTTPLYTWLLTEIPAGGRYGEDPFI
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166606. .16608
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                                                                                                                        translation="MarahwgcCPWLVLLCACAWGHTKPVDLGGQDVRNCSTNPPYLP"
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                                                                                                                                                                                                                                                                                                                                                                              /note="putative proton shuttle; unclassified site"
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                                                                                                                                                                                                                                                                                                                                                                                                                              /note="divalent metal ligand; metal-binding site"
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 .166518,167248. .167307, .172934,173533. .173727)
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                                                                     'product="membrane-bound aminopeptidase
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al Similarity 100.0%; Pred. No. 6.8e-113;
467; Conservative 0; Mismatches 0;
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note="divalent
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DDSRSLTRIPPVHLPGPSLD"
                                                                                                                                                                                  PAT 17-DEC-2003
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                             51098 AGATTGTTGTGTATAAATATGTCTTTATAATAAAAAGCTG
421 AGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG
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37.2%; Score 454; DB 6; I
al Similarity 99.4%; Pred. No. 1.6e-109;
467; Conservative 0; Mismatches 0;
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                                                                                                                                                                       Sequence 12589 from Patent EP1074617. AX877684
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Homo sapiens
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                                                        RESULT 10
AK001855
                                                                                                                    ACCESSION
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                                                                                                                                      Eukaryofa, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases I 2243)
Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishii,S., Sugiyama,T., Makamatsu,A., Nagai,K. and Otsuki,T. Primar for Synthesizing full-length cDNA and use thereof.

Patent: JP 2002191363-A 11634 09-JUL-2002;
                                        PAT 17-JAN-2003
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                                                                                                                                                                                                                                                                                                                                                        JUNICHI YAMAMOTO, SHIZUKO ISHII, TOMOYASU SUGIYAMA, AI WAKAMATSU,
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T CDS Location/Qualifiers
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                       C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/ PC
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                                                                                                                                                                                                                                                                                                            28-JUL-2000 JP 2000280990
TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU
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                                 1 CAATGTTTGCCTATCCACCTCCCCAAGCCCCTTTACCTATGCTGCTAACG-
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97.2%; Score 454; DB 6; L
Best Local Similarity 99.4%; Pred. No. 1.6e-109;
Matches 467; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                      KEIICHI NAGAI, TETSUJI OTSUKI
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                           BD156791.1 GI:27862549
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Homo sapiens (human)
Homo sapiens
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RESULT 9
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PRI 01-AUG-2002
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Submitted (16-FEB-2000) Takao Isogai, Helix Research Institute,
Submitted (16-FEB-2000) Takao Isogai, Helix Research Institute,
Genomics Laboratory: 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
NEDO human cDNA sequencing project supported by Ministry of
International Trade and Industry of Japan, DNA full insert
construction, Fesarch Association for Biotechnology; cDNA library
Hellx Research Association for Biotechnology; cDNA library
Hellx Research Institute (supported by Japan Key Technology Center
etc.) and Department of Virology, Institute of Medical Science,
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KGPPSAHPLRLCLLHRLVCFSGGLTSIQLSPRTCCSHQWAQLFSPACFPQWRAPGCSL
DDSRSLTRIRPVHLPGPSLD"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isogai, T., Ota, T., Hayashi, K., Sugiyama, T., Otsuki, T., Suzuki, Y., Nishikawa, T., Nagai, K., Sugano, S., Takahashi-Fujii, A., Hara, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, R., Takeuchi, K., Arita, M., Nabekura, T., Ishii, S., Kawai, Y., Saito, K., Yamamoto, J., Wakamatsu, A., Nakamura, Y., Nagahari, K., Masuho, Y. and Oshima, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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2194 TAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAAAAGCTG 2243
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                                                                                                                                                                                         2243 bp mRNA linear
Homo sapiens cDNA FLJ10993 fis, clone PLACE1002140.
AK001855
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/note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                                                                                                 AK001855.1 GI:7023382
oligo capping; fis (full insert sequence)
Homo sapiens (human)
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1. .2243
/organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="PLACE1002140"
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Isogai, T. and Otsuki, T.
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	BUKALYOta; Metazoa; Chordata; Craniata; Vertebrata; Euteleoston Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. AUTHORS Toungan, S., Soppet, D.R. and Weaver, Z. TITLE Genee gene determination and therapeutic screening using signs gene sets JOURNAL Avalon Pharmaceuticals (US) Location/Qualifiers JOURNAL Avalon Pharmaceuticals (US) Location/Qualifiers Avalon Pharmaceuticals (US) Location/Qualifiers Avalon Pharmaceuticals (US) Location/Qualifiers Avalon Pharmaceuticals (US) Avalon Pharmaceuticals (US) Location/Qualifiers Avalon Pharmaceuticals (US) Avalon Pharmaceuticals (U	Db 218 AGAAAGTTGGGAACAGAAGGGGTGGGTGGGGGGGGGGGG
Db 1954 CTGTGTCTCCTGCCTCGCCTGCCAGACCAGCCCAGCCCGGGGGAA 2013 Qy 238 GGGGAGAAAGTGGGGATGGCTAAGAAAGCTGGGAATAGGAACAGAAGAGGTAGTGG 297 Db 2014 GGGGAGAAAGTGGGGATGCTAAGAAAGCTGGGAATAGGGAACAGAAGAGGGTAGTGG 2073 Qy 398 GTGGGCTAGGGGGGCTCCTTATTTAAGTGGTTGTTTATACTATTATATA 357 Db 2074 GTGGGCTAGGGGGCTGCTTATTTAAGTGGTTGTTTATACTATTATATA 2133 Qy 358 CAAAGATATAAGGCCTGTTCATTAAGAATTGTTCCCTTCCCTGTTCAATTTATA 2133 Qy 3134 CAAAGATATAAGGCCTGTTCATTAAGAATTGTTCCCTTCCCTGTTTCAATGTTTG 2193 Qy 418 TAAAGATTTATGTGTAAAATTGTTCTTAAAAAAGTTG 467 Db 2114 CAAAGATTCTGTGTAAATTGTTTATAATAAAAAGCTG 467 Db 2119 TAAAGATTGTTCTGTGTAAATTGTTTATAATAAAAAGCTG 2243	RESULT 11 AX33265/C AX332655/C AX332625 AX332625 AX332625.1 G1:18123259 AX332625.1 G1:18123259 AX332625.1 G1:18123259 KEWYORDS SOURCE Homo sapiens (human) ORGANISM Homo sapiens (human) Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. AUTHORS AVAISE SOURCE AUTHORS AVAISE SOURCE AUTHORS AVAION P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G., TITLE Gancer gene determination and therapeutic screening using signature gene sets JOURNAL AVAION Pharmaceuticals (US) FATURES L. 458 AVAION Pharmaceuticals (US) COARION/Qualifiers AVAION PARAMACH B9.8%; Score 419.2; DB 6; Length 458; Matches 433; Conservative 0; Mismarches 11; Indels 1; Gaps 1; Matches 438; COCCAAGCCCCTTAACCTATGCTTGAACGCTGCTGCTGCTTAAA 399 OV 82 GGCT-CAAGCCCCTTAACCTAAGCTTGCTAAACGTGCTGCTGCTTAAA 399 OV 82 GGCT-CAAGCCCCTTAACCTAAGCTTGCTAAACGTGCTGCTGCTTGAAA 399 OV 82 GGCT-CAAGCCCCTTAACCTAAGCTTGCTAAACGTGCTGCTGCTGCTTGAAA 399	Db 398 GGCTCATGAGGATTGGGGCTGCTCCTTCTTCTTCTTCTTCTTCTTCTTCTTC

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                                                                                                                               Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Primer for synthesizing full-length cDNA and use thereof.
BD154391.1 GI:27860149
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
     Sequence 9234 from Patent EP1074617
                                                       AX874329.1 GI:40029100
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Homo sapiens (human)
Homo sapiens
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                                                                                                           JUNICHI YAMAMOTO, SHIZUKO ISHII, TOMOYASU SUGIYAMA, AI WAKAMATSU,
KEIICHI NAGAI, TETSUJI OTSUKI
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Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D.,
Anyalebechi, V., Aoyadi, A., Ayodeji, M., Baca, E., Baden, H.,
Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F.,
Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M.,
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PD 09-JUL-2002
PF 28-JUL-2000 JP 2000280990
PI TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU PI TOSHIO, OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU PI SALTO,
PI JUNICHI YAMAMOTO, SHIZUKO ISHII, TOMOYASU SUGIYAMA, AI WAKAMATI PI KETICHI NAGAI, TETSUJI OTSUKI
PC C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/
                                                                                                                                                                                                                                                 PC C12P21/02,C12Q1/68//C12P21/08,G06F17/30,C12N15/00,C12N5/00
Primer for synthesizing full-length cDNA and use thereof FH K
Location/Qualifiers
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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Pred. No. 7.1e-93;
0; Mismatches 10; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                          1. .403
/organism="Homo sapiens"
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/db_xref="taxon:9606"
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Best Local Similarity 97.5%;
Matches 393; Conservative
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site: http://www.hgsc.bcm.tmc.edu/

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Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Charde, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Clavel, and C., Cockell, R., Cox, C., Coyle, M., Cree, A., D'Souza, L., Davis, C., Cockell, R., Cox, C., Coyle, M., Cree, A., D'Souza, L., Davis, C., Deterich, D., Daylan, C., Deterich, D., Daylan, C., Derson, S., Deramo, C., Ding, Y., Dinh, H., Divya, K., Espace, R., Fallar, T., Fand, T., Fand, C., Fernandez, S., Finley, M., Flagg, N., Crobes, L., Poster, M., Gabls, A., Galls, A., Garcia, M., Hernandez, R., Hines, S., Hines, S., Hume, J., Indeptor, M., Jolivet, M., Harnandez, R., Hines, S., Hume, J., Indeptor, J., Jolivet, M., Karly, S., Kally, S., Kally, S., Kan, Z., King, L., Kovar, C., Lorensuhewa, L., London, P., London, P., London, P., Mantin, M., Liu, Y., Lordon, P., Lorgach, M., Maninder, M., Malloseged, H., Lorando, R., Manjur, M., Maninder, M., Mantin, R., Manjur, M., Maninder, M., Morria, S., Mundaaa, M., Murphy, M., Nankeria, C., Radin, M., Perzz, A., Pand, S., Pand, H., Perzz, A., Pence, S., Lope, M., Mangun, B., Mapua, P., Morria, S., Morria, M., Perzz, A., Pand, M., Pand, S., Pand, H., Perzz, A., Pence, S., Penul, M., Ren, Y., Penter, M., Reves, K., Regier, M., Shert, J., Mangon, M., Millama, S., Warren, J., Wang, C., Warren, J., Wang, C., Warren, J., Wang, C., Warren, J
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Worley, K.C.
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TITLE
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JOURNAL
REFERENCE
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Direct Submission

Submitted (19-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Daylor Plaza, Houston, TX 77030, USA

On Nov 19, 2002 this sequence version replaced gi:23915370.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table. Direct Submission
Submitted (19-JUL-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

3 (bases 1 to 171310)
Rat Genome Sequencing Consortium. REFERENCE AUTHORS TITLE JOURNAL

COMMENT

Center: Baylor College of Medicine Center code: BCM Genome Center

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116761 TGATTGCCTATTCACCCGTCCCAAAATCCTTCCCATCTGCTGCTGCTAATGCTGCTGCTG 116820
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116941 GGCCTTCTCTGTCTTTGTTTTTTGTACCTCTTGCCTTATCAGCCTGCCATGGCCAATC 117000
                                                                                                                                                                                                                                                                                                             * NOTE: Estimated insert size may differ from sequence length

* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a "working draft' sequence. It currently

* Consists of locutigs. daps between the contigs.

* are represented as runs of N. The order of the pieces

* is believed to be correct as given, however the sizes

* of the gaps between them are based on estimates that have

* provided by the submittor.

* This sequence will be replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
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                                                                                                                                                                                                                                                                    Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64 CTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGACTGGGTGGTGCCCAGAAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 TGTTTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGCTGCTG
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                                           Center project name: KAAY
Center clone name: CH230-32806
Assembly program: Pixap; version 0.990329
Consensus quality: 163795 bases at least Q40
Consensus quality: 165400 bases at least Q30
Consensus quality: 165622 bases at least Q20
Estimated insert size: 169296; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by the finished sequence as soon as it is available and the accession number will be preserved.

1 171310: contig of 171310 bp in length.
Location/Qualifiers
1. 171310
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'organism="Rattus norvegicus"
                      Project Information
Contact: hgsc-help@bcm.tmc.edu
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clone_end:Sp6"
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'db xref="taxon:10116"
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169684. .171310
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/note="clone_boundary
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Center clone name: CH230-179117
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Rat Genome Sequencing Consortium.
Direct Submission
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/db_xref="taxon:10116"
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/note="clone boundary
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                                                                                                                                                                                                                                                                                                                              Unpublished
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TITLE
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REFERENCE
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Muzny, D. Marie, Metzker, M. Lee, Adramzon, S., Adams, C., Alder, J., Andlen, C., Allen, H., Alsbrooks, S., Amin, A., Amguiano, D., Anyaleben, W., Asyadej, M., Baratee, B., Badden, H., Baland, J., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Bladwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Bisvalo, K., Blair, J., Eder, M., Barnstead, M., Benahmed, F., Branct, N., Bular, J., Carcaro, J., Carcaro, D., Chaver, D., Charo, J., Davis, J., Jangan, J., Jangan, J., Jangan, J., Jangan, J., Hadan, J., Handerson, J., Handler, J., Handler, J., Handerson, J., Handler, J., Jackson, J
117121 TACTAATTTATATAGAGATATTAAGGCCCTCTGAGTTAAAGAAACTGTCCTCATCCCGTG 117180
                                                                                                                                  117061 GAGGGGAGTGAATGGACCCAGTGGGTGTCTTATTTAAAGTGGTTGTGTTGATTGTTTTT 117120
                                                                                                                                                                                                                                                                                                                                                                            117181 İGİTCACTALGILIGIAAAAATGILCCATGIAAALARGICTILAHAALAAGAGILAAA 117240
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*** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                  405 IGTICA--AIGITIGIAAAGAIIGIICIGIGIAAAIAIGICTITAIAAIAAACAGITAAA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     286 AGAGGTAGTGGGTGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTA
                                                                                                                                                                                                           HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED.
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Rattus norvegicus clone CH230-179117,
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Submitted (123-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
ON Nov 23, 2002 this sequence version replaced gi:24796687.
The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Bach contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
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NOTE: This is a 'working draft' sequence. It currently consists of l contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between the salven provided by the submittor.
This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (08-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

3 (Dases 1 to 208810)

Rat Genome Sequencing Consortium.
Sneed, A., Sodergren, E., Song, X.-Z., Sorelle, R., Sosa, J., Zefeinde, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, C. Taylor, T., Thomas, N., Thomas, A., Tringey, A., Trejos, Z., Usmani, K., Valas, R., Vera, V., Villasana, D., Waldron, L., Walker, B., Wang, J., Walten, S., Warren, S., Waite, F., Woder, R., Woley, R., Yoon, J., Yoon, V., Wight, D., Weisk, R., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Direct Submission
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Consensus quality: 122829 bases at least Q40
Consensus quality: 195654 bases at least Q30
Consensus quality: 197508 bases at least Q20
Estimated insert size: 201423; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
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Contact: hgsc-help@bcm.tmc.edu
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Center code: BCM
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Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares M.B., Bonaldo, M.F., Gsavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.G., Males, Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Lu, X., Gibbs, R.A., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Sanchez, A., Whitling, M., Madan, A., Young, A.C., Shevchenko, Y. Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerth, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse oDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 35 Row: f Column: 13
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 7304894.

Location/Qualifiers

1. .3143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="Mammary tumor. WAP-TGF alpha model. 7 months old, gross tissue."
/clone_lib="NCI_CGAP_Mam5"
/lab_host="DH10B"
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/db_xref="G1:18043670"
/db_xref="LocusID:3098"
/translation="WMLRLCVQALLLIMLSLTAVCGVPLMLPPDGTGLEBGSMRYLVK
PRTSRTGPGAWQGGRRKFRRQRPRLSHKGPMPF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (19-DEC-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs.remail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Prayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Baylor College of Medicine Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center code: BCM-HGSC
Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Loulseged,
Kowis, C.R., Sneed, A.J., Martin, R.G., Muzny, D.M., Nanavati,
A.N., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="MGC:27819 IMAGE:3483588"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="LocusID:30878"
/db_xref="MGI:1353624"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               product="apelin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 3143)
Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . .3143
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PUBMED
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COMMENT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34766 TGATTGCCTATTCACCCGTCCCAAAATCCTTCCCATCTGCTGCTGCTAATGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34826 CTGCTGCCGCTTCAAGGCCCACCCTGGGGAGCTGGGCCAGTCATAGAGTCCTCACTCCTT 34885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34886 GGGCTTGAAGTGGGGGCTTGCTGGTGCCTCTTCTACTGCTGGTACCCCTGCCAGGGACCA 34945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34946 GGCCTTCTCTGTCTTTTGTTTTTGTACCTCTTGCCTTATCAGCCTGCCATGGCCAATC 35005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35006 CCACAĞĞĞAAĞĞĞĞAÇĞAĞĞAĞĞATĞTTĞĞCTĞAĞAAAĞAĞAĞAĞAĞATAĞAAAÇAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35066 GAGGGGGAGTGAATGGACCCAGTGGGCTGTCTTATTTAAAGTGGTTGTGTATGATTCTTA 35125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35126 TACTAATTTATATATAGAGATATTAAGGCCCTCTGAGTTAAAGAAACTGTCCTCATCCCGTG 35185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Butheria; Rodentia; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 3143)
Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Altamner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124 TCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCTTC----- 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CIGCIGCIGCITAAAGGCICAIGCIIGGAGIGGGACIGGICGGICCCAGAAAGIC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174 -----CTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCC 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405 TGTTCA--ATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAAAGAGTTAAA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC020015 3143 bp mRNA linear ROD 12-NOV-;
Mus musculus apelin, mRNA (cDNA clone MGC:27819 IMAGE:3483588),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       286 AGAGGGTAGTGGGTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 208810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 151.8; DB 2; Length
Pred. No. 3.3e-29;
0; Mismatches 157; Indels
                                                                                                                                                                                                                                                                                                                                             /note="wgs_end_extension
clone_end:T7"
                                  site:EcoRI
end sequence:BH303035"
161506. ,163638
                                                                                                                                                                                                                                                                                    end_sequence:BH303034"
178959. .181095
                                                                                                                           /note="wgs_contig"
176821. .176860
/note="clone_boundary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               musculus (house mouse)
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BC020015.1 GI:18043669
               clone end:Sp6
                                                                                                                                                                                                                              clone end:T7
site:EcoRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 63.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 307; Conservative
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Mus musculus
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                                                                                                                                                                                           FEATURES
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This sequence was finished as follows unless otherwise noted: all
                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                 2406 GGGCCCAGIGGGCIGICIIAITIAAAGIGGIIAIGIGIATIICIIAIAIALAAITIAIAIA 2465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL714010 118604 bp DNA linear ROD 31-JAN-2003 Mouse DNA sequence from clone RP23-455F14 on chromosome X, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              shotgun may have been used to confirm this sequence. Sequence data from the whole genome shotgun alone has only been used where it has a phred quality of at least 30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession
                                                                                                                                             2300
                                                                                                                                                                                                                                    2301 GCACCTCCTGCCTTATCAGCCTGCCATGGCCCACACGGGAAAGGGGAGGGGGGAATA 2360
                                                                                                                                                                                                                                                                                                                            ----TGGCTGAGAAAGAGGAGATAGA-AGCACAAGAGGGGGAGTAAAC 2405
                                                                                              179
                                                                                                                                                                                    180 GIGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCGGGGGAAGG 239
                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                          359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                               360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAAT 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata, Vertebrata, Euteleostomi,
Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (31-JAN-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on Feb 1, 2003 this sequence version replaced gi:28172249. Sequence from the Mouse Genome Sequencing Consortium whole genome
                                                                                            121 GTCTTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCT-TCCTTTCT
                                                                                                                                                                                                                                                                           240 GGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAGAGGGTAGTGGGT
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                                                   Gaps
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                                                23;
    DB 10; Length 3143;
                                                Indels
                                           87;
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                          2e-23;
27.8%; Score 129.8; I
69.0%; Pred. No. 2e-23
:ive 0; Mismatches
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Contact: humquery@sanger.ac.uk
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Mammalia; Eutheria; Rodentia;
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                     Local Similarity 69.0
nes 245; Conservative
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    Query Match
                        Best Loca
Matches
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KEYWORDS
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118180 T-------TGGCTGAGAAAGAGAGATAGA-AGCACAAGAGGGGGGGTAAAC 118136
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This sequence was finished as follows unless otherwise noted: all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submission
Submission
Submitted (01-MAY-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On May 2, 2002 this sequence version replaced gi:20330317.
During sequence assembly data is compared from overlapping clones.
Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission.
numbers given in the feature table with their source databases:
Em:, EMBL; SW:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information
on the WORMPEP database can be found at
http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-455F14 is
from the RPCI-23 Mouse BAC Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300 GGGCTAGGGGGGCCTGCCTTATTAAAGTGGTTGTTTATGTTCTTATACTAATTTATACA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                       constructed by the group of Pieter de Jong.
For further details see http://www.chori.org/bacpac/home.htm
VECTOR: pBACe3.6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10; Length 118604;
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Pred. No. 2.3e-23;
0; Mismatches 87;
                                                                                                                                                                                                                                                                                                        1. .118604
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="X"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="RP23-455F14"
/clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                           Location/Qualifiers
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Best Local Similarity 69.0%;
Matches 245; Conservative (
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regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, GANISSPROT; Tr:, TREMBL; WORNDEPP; Information on the WORNDEPP database can be found at
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Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
Anderson,S., Baldwin,J., Barna,N., Bastien,V., Beda,F.,
Boguelavkiy,L., Boukhgalter,B., Brown,A., Burkett,G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180 GTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAAGCCCAAGCCCCGTGGGGAAGG 239
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                            http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-351G20 is from the RPCI-23 Mouse PAC Library—constructed by the group of Pieter de Jong.
For further details see http://www.chori.org/bacpac/home.htm VECTOR: pBACes?
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240 GGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGGAGATAGGGAAACAGAAGAGGGTAGTGGGT
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Pred. No. 2.3e-23;
0; Mismatches 87; Indels 23; G
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Birren,B., Nusbaum,C. and Lander,E.
Mus musculus, clone RP23-15417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
mol_type="genomic DNA"
db_xref="taxon:10090"
/chromosome="X"
/clone="RP23-351G20"
/clone lib="RPC1-23"
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Campopiano, A., Castle, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Domino, M., Doyle, M., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand, P., Ferreira, P., Haeford, A., Horton, L., Grand, P., Lawcque, K., Lamazares, R., Landers, T., Lehoczky, J., Lawcque, K., Lawazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McBwan, P., McGurk, A., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mirand, C., Mollong, Y., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Oliver, J., Peterson, K., Fierre, N., Pasani, C., Pollara, V., Raymond, C., Rilley, R., Rochman, D., Roy, A., Santos, R., Schauer, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Vassillev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Myman, D., Ye, W. J., Young, G., Zainoun, J., Zimmer, A. and Zody, M., Myman, D., Ye, W. J., Direct Submission, Markers, M., Myman, D., Ye, W. J., Direct, Submission, Markers, M., Myman, D., Ye, W. J., Shand, M., Shand, M., Shand, M., Simmer, A., and Zody, M., Shand, M., Shand, M., Simmer, A., and Zody, M., Shand, M., Direct Submission

Direct Submission

Submitted (10-DEC-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

(Dasca 1 to 203865)

(Dasca 1 to 203866)

(Dasca 1 to Direct Summission

Submitted (18-APR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

Barbarian (18-APR-2000)

Barren, B. Nusbaum, C. Lander, E. Ali, A., Allen, N., Anderson, S., Barren, B., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cook, A., Cook, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Farco, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, U., Gordyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Hame, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Macdenald, P., Major, J., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Maters, C., Macdens, M., Melak, J., Major, J., Major, J., Merga, V., Murphy, T., Navlor, J., Nguyen, C., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Sewery, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N. Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Viel, R., Vo, A., Whilson, B., Wu, X., Mymman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct, Submission All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html TITLE JOURNAL TITLE JOURNAL JOURNAL AUTHORS REFERENCE REFERENCE

----- Genome Center Center: Whitehead Institute/ MIT Center for Genome Research

COMMENT

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Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
------ Project Information
Center project name: L8049
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Center code: WIBR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRI 29-AUG-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 GGAGAAAGTGGGGTAAGAAAGCTGGGAAGATAGGGAACAGAAGAGAGGGTAGTGGGT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300 GGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACA 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102180 GTTTGTAAAAATTGTTCCATGTAAATATGTCTTTATAATAAAGAGTTAAAAGTTG 102234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GICTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCCT-TCCTTTCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10; Length 203805;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 27.8%; Score 129.8; DB 10; Length Best Local Similarity 69.0%; Pred. No. 2.3e-23; Matches 245; Conservative 0; Mismatches 87; Indels
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DEFINITION
ACCESSION
VERSION
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HUMZD38F03
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SOURCE

KEYWORDS

REFERENCE AUTHORS REFERENCE AUTHORS TITLE JOURNAL

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TITLE

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1.449.980-seq 05 1.200.001 1.549.980-seq 06 1.500.001
1.849.980-seq 07 1.800.001 2.149.980-seq 08 2.100.001
2.449.980-seq 11 3.000.001 3.499.980-seq 12 3.300.001
3.649.980-seq 13 3.600.001 3.673.778 <223>-Original length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199 CCTGCCATGACCTGCAGCCAAGCCCCGTGGGGAAGGGGA-GAAAGTGGGGGATG 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTCATT-AAGAAATTGTTCCCTTCCCCTG----TGTTCAATGTTTGTAAAGATTGTTC 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125 TTATTTCAAAGTGGTTGTGTATGATTCTTATACTACATCTATATAGAGATATTAAGGCCC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185 icrcacinaaagaaacrsyccrcarccciecrcrrcacrcarcrargraaaarrigric 244
                                                                             Euteleostomi;
                                                                                                                                                                                    Tchernitsa, 0.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITGCCITATCAGCCTGCCATGGCCAATCCCACAGGGAACSSGAGGGAAGGAGGATGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65 GCTGASARASSMSGAGGATASAMACAGAAGAGGGGGAGTGAATGGACCCAGTGGGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317 ITATIT-AAAGIGGIIGIIITAIGAIICITAIACIA-AITIAIACAAAGAIAITAAGGCCC
                                                                             Craniata; Vertebrata; Euteleost
Sciurognathi; Muridae; Murinae;
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Diagnosis of known genetic parameters within the mhc
Patent: WO 0200932-A 13 03-JAN-2002;
Epigenomics AG (DE)
                                                                                                                                                                               Rosenthal, A., Hinzmann, B., Schaefer, R., Zuber, J., Grips, M., Hellriegel, M., Schmitz, A.C. and Sers, C. Detection of differential gene expression Patent: WO 0157058-A 884 09-AUG-2001; Metagen Gesellschaft fuer Genomforschung mbH (DE) Location/Qualifiers
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Sequence 13 from Patent WO0200932,
AX344562
                      Rattus sp.
Rattus sp.
Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (24-AUG-1998) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
SUBMITTED BY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOTICE: This sequence represents the full insert of this cDNA. No attempt has been made to verify whether this corresponds to the full-length of the original mRNA from which it was derived. We have tried to obtain double-stranded, or double chemistry sequence across the entire clone, but potentially, there are areas in the sequence where this level of coverage was not achieved.

Nevertheless, we are confident of the accuracy of this sequence as all regions of low quality, as defined by PHRAP (P. Green, in preparation), were visually inspected and edited accordingly. The consensus quality values for this sequence have been submitted
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                                                                  Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 598)
Woessner, J., Tan, F., Marra, M., Kucaba, T., Yandell, M., Martin, J., Warth, G., Bowles, L., Wylie, T., Bowers, Y., Steptoe, M., Theising, B., Geisel, S., Allen, M., Underwood, K., Chappell, J., Person, B., Gibbons, M., Harvey, M., Pape, D., Chamberlain, A., Morales, R., Schurk, R., Ritter, E., Kohn, S., Swaller, T., Behymer, K., Hillier, L., Full Clone Sequencing of the Longest Available Member from Each Unique Cluster
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/db_xref="taxon:9606"
/clone="IMAGE:342941"
/clone_lib="Soares_fetal_heart_NbHH19W"
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genome Sequencing Center
Department of Genetics
Washington University
The Louis MO 63108, USA
http://genome.wustl.edu/gsc
mailto:est@watson.wustl.edu
FLI_CDNA.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 598)
Waterston, R.
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Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Poaceae;
Enthatroideae; Oryzae; Oryza.

1 (bases 1 to 114971)
Buell, C.R., Yuan, Q., Ouyang, S., Liu, J., Gansberger, K., Jones, K.M., Overton II, L., Tsitrin, T., Kim, M., Bera, J., Jin, S., Fadrosh, D.W., Tallon, L., Koo, H., Zismann, V., Hsiao, J., Blunt, S., Vanaken, S., Riedmuller, S.B., Utterbach, T., Feldblyum, T., Yang, Q., Haas, B., Suh, B., Peterson, J., Quackenbush, J., White, O., Salzberg, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza sativa (japonica cultivar-group) chromosome 11 clone
OSJNBa0059H21, *** SEQUENCING IN PROGRESS ***, 5 ordered pieces.
                                            230 GTGGGGAAGGGGAGAAAGTGGGGATGGCTAAGAAAGCTGGGAAGATAGGGAACAGAAGAG
                                                                                                     342743 GAGTGGAAGTTTGGAAGGGGAGGGGTTTGTAATTTÄTTTGGAAGATTGTGATTGAAAAGG
                                                                                                                                                                                                                                      342803 ATTGAGGAATGGCGTAAGGAGGAATCGTTTTTTATAGTATTGATTTTATATTATTTTTT
                                                                                                                                                                                                                                                                                                   350 AATITATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTGTTC
                                                                                                                                                                      GGTAGTGGGTGGGCTAGGGGGGGGCTGCTTATTTAAAGTGGTTGTTTATGATTCTTATACT
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* of the gaps between them are based on estimates that have
* provided by the submittor.
* This sequence will be replaced
* by the finished sequence as soon as it is available and
* the accession number will be preserved.

* 1 29813. contig of 29813 bp in length
* 29914 29913. gap of unknown length
* 53925 71255. contig of 17331 bp in length
* 53925 71255. contig of 17331 bp in length
* 71256 71355. gap of unknown length
* 71256 71355. gap of unknown length
* 71356 115072. contig of 43717 bp in length
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* NOTE: This is a "working daaft" sequence. It currently a consists of 5 contigs. Gaps between the contigs.

* are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .134971
/organism="Oryza sativa (japonica cultivar-group)"
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134971: contig of 19799 bp in length.
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Submitted (27-WAR-2002) The Institute for Ge
Medical Center Dr, Rockville, MD 20850, USA
3 (bases 1 to 134971)
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AC116367.9 GI:24431629
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of seq 2: 3.673778 <223>-split as follows.~seq 14
0.000.001 TO 0.349.980-seq 15 0.300.001 649.980~seq 16
600.001 949.980-seq 17 90.001 1.249.980-seq 18 1.200.001
1.549.980-seq 19 1.500.001 1.849.980-seq 20 1.800.001
2.149.980-seq 21 2.100.001 2.449.980-seq 22 2.400.001
3.349.980-seq 23 2.700.001 3.649.980-seq 24 3.000.001
3.349.980-seq 25 3.300.001 3.649.980-seq 26 3.600.001
3.673.778"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGGGAAGGGGAAAAGTGGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAGAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         290 GGTAGTGGGTGGGCTAGGGGGCTGCTTATTTAAAGTGGTTGTTTATGATTCTTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42803 ATTGAGGAATGGCGTAAGGAAGGAATCGTTTTTTATAGTATTGATTTTATATTATTTTTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42863 TTTTGTTTTAGTTTTATTTTAGGGAGAGATTAAGAAGAGGAAATGTTTGTTTGGTTTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
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                                                                                                                                                                                                                                                                                                                           9.9%; Score 46.4; DB 6; Length 73778; 50.0%; Pred. No. 0.31; ive 0; Mismatches 116; Indels 0;
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Diagnosis of Known genetic parameters within the mhc
Patent: WO 0200932-A 12 03-JAN-2002;
Epigenomics AG (DE)
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forganism="synthetic construct"
mol_type="unassigned DNA"
db.xref="taxon:32630"
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Sequence 12 from Patent W00200932.
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AX344561.1 GI:18492447
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Matches 116; Conservative
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synthetic construct
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AX344561
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L (Joses I. C. 2.1289)

Allen, C. Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Anguiano, D., Bandaranaike, D., Barber, M., Barcatead, M., Benahmed, F., Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Brant, S., Blyth, P., Brown, M., Brant, C., Barch, P., Brenell, K., Calderon, S., Carderas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Cardera, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, S., Chen, S., Chen, R., Chen, T., Davila, M.L., Davis, C., Davyla, M., Cree, A., D'Souza, I., Delgado, O., Densen, S., Deramo, C., Coyle, M., Cate, A., D'Souza, I., Delgado, O., Densen, S., Deramo, C., Divy, Y., Dihl, H., Divya, K., Eugen, M., Fanger, H., Fanger, M., Fager, K., Fanger, C. M., Cabisi, A., Garne, T., Garcia, A., Garner, T., Gebregorgis, E., Geer, K., Gill, R., Garcia, A., Garner, T., Gabisi, A., Ganta, R., Garcia, A., Garner, M., Handar, S., Haladun, S.L., Hodgson, A., Hernandez, S., Haladun, S.L., Hodgson, A., Hernandez, J., Havells, S., Hulyk, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28637 WWWWMMMWYSRAWITWWTWRSCSSCYKSCMMMRKYSSYYCYKGKKKYSSCYKKYCSSCSR 28696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC134496 212887 bp DNA linear HTG 20-NOV-2002
Rattus norvegicus clone CH230-402H13, WORKING DRAFT SEQUENCE, 2
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                     163 TTTCCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCC 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               223 CAGCCCCGTGGGGAAGGGGAGAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAC
                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                        .
0
                                                                                                                                                                                                                                                                                   Query Match 9.6%; Score 45; DB 2; Length 134971;
Best Local Similarity 12.6%; Pred. No. 0.75;
                                                                                                                                                                                                                                                                                                                                                        40; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC134496.2 GI:25139155
HTG; HTGS PHASE1; HTGS DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                             /note="japonica cultivar-group"
                                                                                                                                                                                                                                                                                                                                                        85; Mismatches
/mol_type="genomic DNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/chromosome="11"
/clone="OSJNBa0059H21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28757 MRRAARRRAARRGGRRRKTW 28779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283 AGAAGAGGTAGTGGGTGGGCTA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 212887)
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                                                                                                                                                                                                                                                                                                                                                        18;
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AC134496/c
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Direct Submission

Direct Submission

Submitted (20-NOV-2002) Human Genome Sequencing Center, Department Submitted (20-NOV-2002) Human Genetics, Baylor College of Medicine, One of Molecular and Human Genetics, Baylor College of Medicine, One Daylor Plaza, Houston, TX 77030, USA

On Nov 20, 2002 this sequence version replaced gi:23334646.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas and whole genome shotgun sequencing reads assembled using Atlas in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence.
                             Reilly, B. Reilly, M. Rent. W. Richards, S. Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R. Ruiz, S. J. Sanders, W., Savery, G., Scherer, S., Scott, G., Shateman, S., Sher, Shetty, J. Shvartsbeyn, A., Sisson, I., Sitter, C. D., Smajs, D., Sneed, A., Sodergren, B., Song, X. -Z., Sorelle, R., Sosa, J., Steinle, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, C. Taylor, T. Thomas, N., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Vera, V., Vallasman, D., Waldron, L., Walker, B., Wang, J., Wang, C., Wallson, R., Waldron, L., Walker, B., Wang, J., Willson, R., Wlester, R., Woden, H., Worley, K., Wright, D., Wright, R., Wu, Y., Yakub, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D. R., Holt, R. A., Smith, H.O., Direct Submission
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* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft data.html).

* NOTE: This is a "working draft" sequence It currently

* Consists of 2 contigs. The true order of the pieces

* is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Department
Quiroz, J., Rachlin, E., Reeves, K., Regier, M.A., Reigh, R.,
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------- Summary Statistics
Assembly program: Phrap; version 0.990329
Consensus quality: 202261 bases at least Q40
Consensus quality: 204675 bases at least Q30
Consensus quality: 205966 bases at least Q20
Estimated insert size: 205697; wm-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (27-SEP-2002) Human Genome Sequencing Center, Departmen
Submitted (27-SEP-2002) Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 212887)
Rat Genome Sequencing Consortium.
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------- Project Information
Center project name: KBRX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36597 CTGCTGCTGCTGCTGCTGCTGCTGCTGTTGGTGCAGTGGTGGTGGTGGTCCCTGTT 36538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACLUSH82 272030 bp DNA linear HTG 09-NOV-2002
Rattus norvegicus clone CH230-20G17, WORKING DRAFT SEQUENCE, 13
unordered pieces.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAAGTC 123
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 TGTTTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTAACGCTGCTGCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRAFT; HTGS_FULLTOP
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HTG; HTGS PHASE1; HTGS DRAFT; 1
Rattus norvegicus (Norway rat)
Rattus norvegicus
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AC105482
LOCUS
DEFINITION
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SOURCE
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Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J.,
Hernandez, R., Hines, S., Hladun, S.L., Hodgson, A., Hogues, M.,
Hollins, B., Howells, S., Hulyk, S., Hume, J., Idlebird, D. Jackson, A.,
Jackson, L., Jacob, L., Jiang, H., Johnson, R., Johnson, R.,
Inu, J., Lally, S., Kelly, S., Khan, Z., King, L., Kovar, C.,
Karpathy, S., Kelly, S., Kelly, S., Khan, Z., King, L., Kovar, C.,
Lorensuhewa, L., Lebow, H., Lorado, R.J., Lopez, J.,
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Mahashari, M., Mahindartne, M., Mahmoud, M., Malloy, K., Mangum, A.,
Mahashari, M., Marier, G., Mortei, R., Martin, R., Martin, R.,
Mandeshari, M., Morris, K., Morrin, K., Martin, R., Martin, P.,
Morgan, M., Morris, K., Morris, S., Munidasa, M., Murphy, M., Nair, L.,
Nandelemeh, O., Okwuoun, G., Olarnpunsagoon, A., Pal, S.,
Pasternak, S., Paul, H., Perez, A., Perez, L., Primus, R., Pul, L.-L.,
Puazo, M., Wolfede, M., Ren, Y., Revers, K., Regier, M.A., Reigh, R.,
Reilly, B., Reilly, M., Ren, Y., Rose, M., Richards, S., Shen, H.,
Sanders, W., Savery, G., Scherer, S., Scott, G., Shatsman, S.,
Shetty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D.,
Steimle, M., Strong, R., Sutch, A., Tabor, P., Taylor, C.,
Taylor, T., Thomas, M., Thomas, S., Tingey, A., Tabor, P., Taylor, C.,
Taylor, T., Thomas, M., Thomas, S., Tingey, A., Tabor, P., Taylor, C.,
Willsams, G., Willson, R., Wilcse, K., White, F.,
Williams, G., Willson, R., Wilcsey, R., Warter, F., Warght, D., Wright, P., Wright, D., Wright, R., Willson, R., Walse, R., Wals, S., Warten, S., Warten, S., Wen, J., Yoon, V.,
Willston, W., Wilsse, R., Smith, D.R., Holt, R.A., Smith, H.O.,
Weinstook, G. and Gibbs, R.A., Smith, D.R., Smith, H.O.,
Weinstook, G. and Gibbs, R.A., Smith, D.R., Smith, H.O.,
Weinstook, G. and Gibbs, R.A., Smith, D.R., Smith, H.O., Weise, R. C., Son, M., Smith, H.O., Weise, R. C., Smith, D.R., Smith, H.O., Weise, R. C., S
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On Nov 9, 2002 this sequence version replaced gi:23267948.
The sequence in this assembly is a combination of BAC based reads and whole genome shockyn sequencing reads assembled using Atlass (http://www.ngsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the astimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome contigs will be indicated in the feature
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Assembly program: Phrap, version 0.990329
Consensus quality: 255866 bases at least Q40
Consensus quality: 259060 bases at least Q30
Consensus quality: 269083 bases at least Q20
Estimated insert size: 263005; sum-of-contigs estimation
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Web site: http://www.hgsc.bcm.tmc.edu/
Notact: hgsc-help@bcm.tmc.edu
Contact: Project Information
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Center clone name: CH230-20G17
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Center clone name: 173_D_8
                                                                                                                                                                AC101159.1 GI:17059933
HTG; HTGS PHASE0.
Mus musculus (house mouse)
Mus musculus
                               65053 GCTTCTGCTACTG 65065
                                                                                                                                                                                                                                                                                                                                       (bases 1 to 71781)
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1555:
1655:
   124 TCTTCTGCCACTG 136
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838
1556
                                                                                                                                                     AC101159
                                                                                                                               DEFINITION
                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
JOURNAL
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JOURNAL
                                                                                 RESULT 28
AC101159
                                                                                                                                                  ACCESSION
                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                    REFERENCE
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NOTE: This sequence may represent more than one clone.
NOTE: This is a 'working draft' sequence. It currently consists of 13 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Quality coverage: 9x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 TGTTTGCCTATCCACCTCCCCAAGCCCCTTTACCTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG
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0
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                                                                                                                                                                                                             5173: contig of 5173 bp in length 5273: gap of unknown length 15912: contig of 10539 bp in length 15912: gap of unknown length 15593: contig of 3681 bp in length 19693: gap of unknown length 15693: gap of unknown length 258497: contig of 238804 bp in length 25857; gap of unknown length 258907: contig of 1210 bp in length 259907; gap of unknown length 259907; gap of unknown length 259907; contig of 1210 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of 1298 bp in length
gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of unknown length contig of 2103 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                length
bp in length
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of 1158 bp in length
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bp in length
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gap of unknown length
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contig of 1427 b
gap of unknown l
                                                                                                                                                                                                                                                                                                                                                                                                  gap of unknown
contig of 1158
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="genomic DNA"
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/clone="CH230-20G17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _sequence:BH320006"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             end sequence:BH320007"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1969. ... 2830
/note="clone_boundary
clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'note="clone boundary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15913. .17329
/note="wgs_contig"
??7547. .238337
                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone end:Sp6
site:EcoRI
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19594
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258498
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266075
266175
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269828
269928
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263446
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264973
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260930
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Birren, B., Linton, L., Musbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Calangelo, M., Callins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreire, P., Fitzhugh, W., Gage, D., Galagen, J., Gardyna, S., Ginde, S., Goyette, M., Gradma, L., Gardyna, S., Ginde, S., Goyette, M., Gradma, L., Gardyna, S., Lamazares, R., Hados, B., Heaford, A., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamata, A., Karatas, A., Kells, C., LaRocque, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Levine, R., Liu, G., MacLean, C., Macdonald, P., Major, J., Marthews, C., Macdonald, P., McKernan, K., McDheeters, R., Maltrim, J., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olveil, D., Olveil, D., Olveil, D., Olveil, D., Olveil, D., Stender, S., Schupback, R., Stantos, R., Schauer, S., Schupback, R., Stantos, R., Schauer, S., Schupback, R., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Tialans, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Liel, R., Van, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Liel, R., Vo, A., Talamas, J., Tesfaye, S., Theodore, J., V
      HTG 23-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
I (bases 1 to 71781)
Birren, B., Linten, L., Nusbaum, C. and Lander, E.
Mus musculus, clone RP23-173D8
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Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
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Center: Whitehead Institute/ MIT Center for Genome Research
AC101159 11781 bp DNA linear HTG 23
Mus musculus clone RP23-173D8, LOW-PASS SEQUENCE SAMPLING.
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------ Project Information
Center project name: L16056
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837: agp of 100 bp
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                                                                                                           NA linear HTG 15-NOV-2002
*** SEQUENCING IN PROGRESS
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                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa, Chordata; Craniata; Vertebrata; Büteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                            AC119515
AC119515.5 GI:25012225
HTG; HTGS PHASEZ; HTGS DRAFT; HTGS ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                              AC119515 213417 bp DN
Rattus norvegicus clone CH230-40602,
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                                                  RESULT 29
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KEYWORDS
SOURCE
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                                                                                AC119515
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Direct Submission

Submitted (15-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 7730, USA

On Nov 15, 2002 this sequence version replaced gi:23616941.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing relates assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence conly contigs will be indicated in the feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * NOTE: Estimated insert size may differ from sequence length

* (see http://www.hgsc.bom.tmc.edu/docs/Genbank draft_data.html).

* NOTE: This is a "working draft' sequence. It currently

* consists of 1 contigs. Gaps between the contigs.

* are represented as runs of N. The order of the pieces
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Quality coverage: 5x in Q20 bases; sum-of-contigs estimation
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This sequence will be replaced by the finished sequence as soon as it is available and the accession maker will be preserved.

1 213417: contig of 213417 bp in length.
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Web site: http://www.hgsc.bcm.tmc.edu/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: hgsc-help@bcm.tmc.edu
------ Project Information
Center project name: GUQW
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'db_xref="taxon:10116"
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clone_end:Sp6"
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(bases 1 to 213417)
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Best Local Similarity 50.7%
Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . .1798
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Daylor plaza, Houston, TY 77030, USA

On May 13, 2003 this sequence version replaced gi:22855692.

The sequence in this assembly is a combination of Bac based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold in dividual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 3 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                             2 (bases 1 to 242655)
Worley,K.C.
Worley,K.C.
Submitted (22-0AN-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 242655)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (13-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, IX 77030, USA
Assembly program: Atlas 3.0;
Consensus quality: 230159 bases at least Q40
Consensus quality: 232877 bases at least Q30
Consensus quality: 234876 bases at least Q20
Estimated insert size: 245578; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           shotgun sequence only contigs will be indicated in the feature table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239139: contig of 239139 bp in length 239239: gap of unknown length 240581: contig of 1342 bp in length 240581: gap of unknown length 242655: contig of 1974 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center: Baylor College of Medicine Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center project name: GIXA
Center clone name: CH230-86H10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --- Summary Statistics
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/db_xref="taxon:10116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone="CH230-86H10"
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2365. .5223
/note="wgs_contig"
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240582
240682
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
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MAINTY, D. Marie., Metzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allach, C., Allach, H., Alsbrooks, S., Amin, A., Anguiano, D., Allach, C., Allach, H., Alsbrooks, S., Amin, A., Anguiano, D., andylebechi, V., Aoyacid, M., Aydedi, M., Aydedi, M., Baca, E., Baden, H., Baldaranaike, D., Barrell, K., Calderon, E., Cardera, M., Erandarol, K., Blair, J., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Blair, J., Charzo, J., Cardzos, I., Cearat, H., Center, A., Carderas, V., Carder, M., Davilla, M.L., Davis, C., Davy, Carroll, L., De Anda, C., Dedarich, D., Dalgado, O., Denson, S., Dens, A., Dung, M., Porbes, L., Foater, M., Foater, P., Egan, G., Fernandez, S., Finley, M., Elagy, M., Porbes, L., Foater, M., Gabrar, C., Karpathy, S., Kelly, S., Kelly, S., Khan, Z., Kingl, M., Karpathy, S., Kelly, S., Kally, S., Khan, Z., Kingl, M., Maloy, M., Ren', M., Ren's, M., Reves, K., Marken, M., Ren's, M., Reves, M., Reves, M., Reyly, M., Ren', M., Ren', M., Ren', M., Ren', M., Maloy, M., Maloy
                                                                                                                                                                                                                                                                                                                                           187426 TGGTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGTAGTTTAGGAATCCACTAGAAA 187485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parties norvegicus clone CH230-86H10, *** SEQUENCING IN PROGRESS AC107465
                                                                                                                                                        351
                                                                                                                                                                                                                                                                           352 TITATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAA 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                 292 TAGTGGGTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG; HTGS PHASEL; HTGS DRAFT; HTGS ENRICHED.
Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187546 TTTTTATTATTGTTTTTTTTACTAAGAT 187574
                                                                                                                                                                                                                                                                                                                                                                                                               TGTTTGTAAAGATTGTTCTGTGTAATAT 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC107465.6 GI:30580831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 242655)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                               412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 30
AC107465/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
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ACCESSION VERSION KEYWORDS SOURCE

REFERENCE AUTHORS

0;

0; Gaps

Indels

43; DB 10;

1.2;

Length 243369;

61

HTG 23-AUG-2003

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139975 AATGGAGGGTTTCACTGTACAAAAGGGCCCAGTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC146436
Pan troglodytes chromosome UNK clone RP43-16B7, *** SEQUENCING IN PROGRESS ***, 15 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata, Vertebrata, Buteleostomi,
Catarrhini, Hominidae, Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (13-AUG-2003) Genetics, Genome Sequencing Center, 4444 Forest Park Parkway, St. Louis, MO 63108, USA (bases 1 to 173254)
                                                                                                                                                                                                                                                                                                                                                                 2 AAIGITIGCCIAICCACCICCCCCAAGCCCCTIIACCIAIGCIGCIGCIAACGCIGCIGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    140035 TGCTGCTGCTGCTGCTAAGCAGACTAAAGTTGGACTGTGGGATCTTCAGTTCC 140087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62 TGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGGACTGGTCGGTGCC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (23-AUG-2003) Genetics, Genome Sequencing Center, Forest Park Parkway, St. Louis, MO 63108, USA On Aug 23, 2003 this sequence version replaced gi:33621016.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        * NOTE: This is a 'working draft' sequence..It currently
consists of 15 contigs. The true order of the pieces
is not known and their order in this sequence record is
arbitrary. Gaps between the contigs are represented as
runs of N, but the exact sizes of the gaps are unknown.
This record will be updated with the finished sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: Washington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chemistry: Dye-primer ET; 0% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.990319
Consensus quality: 164865 bases at least Q40
Consensus quality: 166558 bases at least Q30
Consensus quality: 167480 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site:http://genome.wustl.edu/gsc/index.shtml
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence of Pan troglodytes clone
                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center project Information
                                                                                                                                                                                                                                                        Score 44.2;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing vector: M13; 0%
                                   organism="Mus musculus"
                                                       /mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="#"
/clone="RP23-173D8"
/clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vector: plasmid; 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC146436.2 GI:34147022
HTG; HTGS PHASE1.
Pan troglodytes (chimpanzee)
Pan troglodytes
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                                                                                                                                                                                                                                                     Query Match 9.5%;
Best Local Similarity 61.9%;
Matches 70; Conservative
     .243369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center code: WUGSC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
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        source
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KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
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JOURNAL
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This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, SWISSPROT; Tr:, TREMBL; WP: MORNEEP; Information on the WORMPEP database can be found at
                                                                                                                                                                                                                                                                            191538 TGGTGGAGGAGGAAGAGGAGGAGGAGGAAGAGGAGTAGTTTAGGAATCCACTAGAAA 191479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROD 04-OCT-2002
                                                                                                                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL606973 243369 bp DNA linear ROD 04-OCT-2003
Mouse DNA sequence from clone RP23-173D8 on chromosome 4, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata, Vertebrata, Euteleostomi,
Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (04-OCT-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Oct 3, 2002 this sequence version replaced gi:23337158.
                                                                                                                                                                                                                        232 GGGGAAGGGGAAAGTGGGGATGGCTAAGAAAGCTGGGAATAGGGAACAGAAGAGG
                                                                                                                                                                                                                                                                                                                                    TAGTGGGTGGGCTGGGTGCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                352 TITATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTTCAA
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.sanger.ac.uk/Projects/C_elegans/wormpep_RP23-173D8
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For further details see http://www.chori.org/bacpac/home.htm
                                                                                                      Score 44.2; DB 2; Length 242655;
Pred. No. 1.2;
                                                                                                                                                                   ;
0
                                                                                                                                                             0; Mismatches 103; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center: Wellcome Trust Sanger Institute
Center code: SC
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Contact: humquery@sanger.ac.uk
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Mammalia; Eutheria; Rodentia;
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                          /note="wgs_contig"
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237046. .239139
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Clark, G.
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DEFINITION

ACCESSION VERSION KEYWORDS

RESULT 31 AL606973

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SOURCE

AUTHORS TITLE

REFERENCE

JOURNAL

COMMENT

FEATURES

Genome Sequencing Center, 4444) 63108, USA

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AF441245 903 bp mRNA linear INV 19-NOV-2001
Nephila clavata dragline silk protein spidroin 2 mRNA, partial cds.
AF441245
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2 (bases 1 to 903)

Ma.H.W., Zhang, L.S. and Zhang, Y.J.

Direct Submission

Submitted (30-00T1-2001) Biochemistry Section, Faculty of Basic
Courses, Quartermaster University, 175 Xi'an Road, Changchun, Jilin
                                                                                                                                                               GASAAAAAAGPGGYGPĞQQGPGQQGPAGYGPSGPSGPSGPGGAAAAAAAGPGG
YGLGQQGPGQQCPGQQCPAGYGPSGLSGPGGAAAAAAAGPGGYGPGQQRPSGPGGAAA
AAAAGPGGYGPSQRGPSGBSAAAAAAGAGPGGYGPGQKGPSGPGSAAAAAAGPGG
YGPSQQGPARYGPSGSAAAAAAAGGTGTAGYGPPGASAAASRLASPDSGARVASAVS
NLVSSGPTSSAALSSVISNAVSQIG"
                                                                      CTTTCCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGC 221
                             42 GCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGG 101
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                                                                                                                    102 ACTGGTCGGTGCCCAGAAAGTCTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTT
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167480. .168940
/note="assembly_name:Contig54"
169041. .170155
/note="assembly_name:Contig72"
170256. .171444
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/note="assembly_name:Contig108"
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/note="assembly_name:Contig112"
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'note="assembly_name:Contig115"
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/note="assembly_name:Contig110"
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.64469. .165829
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65930. .167379
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171545. .173254
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Oorganism="Pan troglodytes"
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|db_xref="taxon:9598"
|chromosome="UNK"
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Submitted (17-DEC-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Dec 17, 2003 this sequence version replaced gi:28933642.
All repeats were identified using RepeatMasker:
                                                                                                                                          arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTE: This is a 'working draft' sequence. It currently consists of 6 contigs. The true order of the pieces is not known and their order in this sequence record is
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Pred. No. 1.6;
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Organism=Mus musculus"
|mol_type="genomic DNA"
|db xref="taxon:10090"
|chromosome="1"
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/clone="RP24-395P3"
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Homo sapiens
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     Direct Submission
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HSDJ989D7
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Surren, 320 Charles Street, Cambridge, MA 02141, USA

Shaess 1 to 155656.

Birren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N.,

Anderson, M., Arachchi, H.M., Barria, N., Bastien, V., Bloom, T.,

Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y.,

Collymore, A., Cook, A., Cooke, P., Corum, B., DeArellano, K.,

Diaz, J.S., Dodgey, S., Dozley, K., Derkis, L., Erickson, J., Faro, S.,

Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Hagos, B.,

Hall, J., Horton, L., Hulme, W., Ilev, I., Ohnson, R., Jones, C.,

Kamat, A., Karatas, A., Kells, C., Landers T., Levine, R.,

Lindblad-Toh, K., Liu, X., Lui, A., Mabbitt, R., MacLean, C.,

Macdonald, P., Manow, T., Mandiews, C., McCarthy, M.,

Maldrim, J., Meneus, L., Minow, T., Mungay, V., Wurphy, T., Naylor, J.,

Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,

Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,

Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P.,

Roman, J., Schauer, S., Schupback, R., Sewerzy, P., Smith, C.,

Talamas, J., Tesfaye, S., Theodore, J., Troyens, M.,

Vassillev, H., Venkataraman, V. S., Vael, R., Vallson, B., Wu, X.,

Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disease 1 to 155665)

Barran, N., Bastien, V., Bloom, T., Bouglavky, L., Bouthgalter, B., Camarak, J., Chang, J., Chack, D., Chochel, Y., Cooke, P., DeArellano, K., Bowar, K., Diaz, J.S., Dodge, S., Camarak, J., Chang, J., Chang, J., Chang, J., Chang, J., Chochel, Y., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Faro, S., Faro, S., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Ile, T., Tonnson, C., Kandson, C., Kandson, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mihova, T., Matthews, C., McCarthy, M., Meldrim, J., Maneus, L., Mihova, T., Matthews, C., Norman, C.H., Wurphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., Phunkhang, P., Pierre, M., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Roy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thoman, M., Scojanovic, N., Topham, K., Schauer, S., Schupback, R., Saman, S., Severy, P., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Direct Submission

Submitted (14-SEP-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC133581 17-DEC-2003 Mus musculus chromosome 1 clone RP24-395P3 map 1, *** SEQUENCING IN PROGRESS ***, 6 unordered pieces.
                    71 TGCTGCTTAAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCCAGAAAGTCTCTTCTG 130
                                                                      276 Gáctigerecaectrecaegrecaearidereceariderecarariceaecrearieride 217
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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Birren, B., Nusbaum, C. and Lander, E.
Mus musculus chromosome 1, clone RP24-395P3
                                                                                                                                                                                                                                              191 CTCATCGGCCTGCCATGACCTGCAGGCCCAG 225
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Mus musculus (house mouse)
Mus musculus
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HSDJ989D7 119790 bp DNA linear PRI 10-MAR-2001 Human DNA sequence from clone RP5-989D7 on chromosome 20. Contains the 3' end of a novel gene, STSs and GSSs, complete sequence.
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 119790)
Griffiths, C.
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Gaps

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18038. 18183
/note="LiMA10 repeat: matches 6174. .6316 of consensus'
18188. 18525
/note="LiMB7 repeat: matches 2409. .2740 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .6095 of consensus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .6317 of consensus'
                                                                                                                                                                                                                                                                                                                                 .6165 of consensus"
                                                                                                                                                                                                                                                                                                                                                                              .5474 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                        .6168 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [7734. 17987
| hote="LiMB1 repeat: matches 5782. .6043 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat: matches 2740. .6162 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .5892 of consensus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .378 of consensus"
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note="LTR16C repeat: matches 81. .221 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="match: STS: Em:L16414"
35731. .35802
/note="MLT10 repeat: matches 124. .196 of consensus"
35934. .36427
/note="match: GSS: Em:AQ429711"
35967. .36020
                                                                                    /note="MLT1J repeat: matches 13. .513 of consensus"
14687. .14768
                                                                                                                     .4687. .14768
note="HAL1 repeat: matches 271. .360 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70759. .31042

/note="MBR33 repeat: matches 47. .323 of consensus"

31306. .31349

/note="22 copies 2 mer tt 84% conserved"

31491. .31825

/note="MBR77 repeat: matches 38. .400 of consensus"

complement(31606. .32269)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="MER7A repeat: matches 1. .345 of consensus"
24440. .24524
/note="L1MA10 repeat: matches 6095. .6317 of conser
7.note="L1MA1 repeat: matches 3550. .6326 of consens
complement(27586. .28074)
/note="match: GSS: Em:AQ605230"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .239 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .354 of consensus"
                                               .249 of consensus"
                                                                                                                                                                                        matches 1. .345 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10385. .30489

note="MIR repeat: matches 40. .153 of consensus"

10759. .31042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28283. .28491
/hore="LTRIEA repeat: matches 148. .378 of consen:
28592. .28729
/hote="MIR repeat: matches 26. .167 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .617 of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24031. 24127
/note="LiMA10 repeat: matches 5993.
24128. 24439
                                                                                                                                                                                                                                                                          note="match: GSS: Em:AQ012918"
15807. 16507
note="LiMBZ repeat: matches 5469.
                                                                                                                                                                                                                                                                                                                                                16561. 17220

"Mote="LiMB2 repeat: matches 4871.

17218. 17509

"Mote="LiMB8 repeat: matches 5848.

17581. 17733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13729. .24007
note="LIME1 repeat: matches 5598.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18526. .18878
/note="THE1A repeat: matches 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="MER8 repeat: matches 87.
                                                                                                                                                                                                                                  'note="match: GSS: Em:AQ772240"
-5375. .15560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29416. .29585
/note="MER5B repeat: matches 1.
                                       'note="MIR repeat: matches 60.
2659. .13160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  omplement(31606. .32269)
note="match: GSS: Em:AQ266996"
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                                                                                                                                                                                        repeat:
                                                                                                                                                          15106. .15438
/note="MER2 re
                                                                                                                                                                                                            .15768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .8879. .22631
'note="L1MB7 r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3154. .33323
note="LTR16C
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                                                                                                                                                          There is not the control of the coverlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with control only a small overlap as described above.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em., EMBL; Sw.; SWISSPROT; TI:, TREMBL; WP:, WORNER; Information the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the WORNERP database can be found at the properties of constructed by the Sanger Centre Chromosome 20, constructed by the Sanger Centre Chromosome 20 http://www.sanger.ac.uk/HGP/Chr20

MRPDFIANT: This sequence is not the entire insert of clone RPE-589D7 It may be shorter because we sequence overlapping sections only once, except for a 100 base overlap.

The true left end of clone RPE-889D7 is at 11 in this sequence. The true right end of clone RPE-199014 is at 11951 in this sequence. This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequencing problems, such one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by the group of Pieter de Jong. For further details see
                                                                                            On Aug 22, 2000 this sequence version replaced gi:9714378.
During sequence assembly data is compared from overlapping clones.
Where differences are found these are annotated as variations
                        Submitted (02-MAR-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1294. .4326
'note="L1MB0 repeat: matches 5834. .5865 of consensus'
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/note="TIGGER1 repeat: matches 1. .2418 of consensus"
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11843. 12150
/note="AluSx repeat: matches 1. 308 of consensus"
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/note="continued from bA199014.1 in Em:AL162504
match: cDNAs: Em:AY007089"
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10382. .10435
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/note="L1M4_repeat: matches 4784.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="genomic_DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .8633)
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/clone="RP5-989D7"
/clone_lib="RPCI-5"
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/note="match: GSS:
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/gene="dJ989D7.1"
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TITLE
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115477 AAGICTICACAGAAAAICCCIAIAGAAAGAITITATTTTCIAGIAAGAACCIGAIGTIIG 115536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          384 AGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATATGTC 443
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                       /note="L1PA16 repeat: matches 3923. .6157 of consensus"
43715. .43783
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                                                                            consensus
                                                                                                                                                                                                                                                         note="MLT1A1 repeat: matches 4. .365 of consensus"
                                                                                                                                                                                                                       .2484 of consensus"
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                                                                                    38224. .38413
/note="match: GSS: Em:AZ235965"
38910. .39037
/note="MR repeat: matches 74. .225 of consensus"
39663. .39103
/note="L2 repeat: matches 2705. .2745 of consensus"
39217. .39290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="MIR repeat: matches 97. .139 of consensus" 4731. .47479
47331. .47479
complearent(47625. .48021)
                                                                                                                                                                                                                                                                                                                                                                                                                                        note="MIR repeat: matches 14. .80 of consensus"
$15011. .45066
note=114 copies 4 mer tata 80% conserved"
$15244. .45466
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0
               35968. .36019
/note="13 copies 4 mer agat 100% conserved"
36212. .36570
/note="LTR16A repeat: matches 57. .433 of co
tagata 75% conserved"
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Homo sapiens BAC clone RP11-621K10 from 2, complete
AC093112
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                                                                                                                                                                                                                   'note="L2 repeat: matches 2410.
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.46523
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45535. .45726
/note="L2 repeat: matches 2557.
46043. .46146
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58.6%; Pred. No. 2.2;
iive 0; Mismatches
note="9 copies 6 mer
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Sulston, J.E. and Waterston, R.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="L2
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Best Local Similarity 58.6
Matches 75; Conservative
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AC093112
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SOURCE
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Submitted (09-AUG-2001) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
4 (bases 1 to 59414)
Waterston, R.H.
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Submitted (23-FBB-2002) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mapping information for this clone was provided by Dr. John D. MoPherson, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu/gsc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (20-MAR-2002) Department of Genetics, Washington
Submitted (20-MAR-2002) Dark Avenue St. Louis, Missouri 63108,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                On Mar 20, 2002 this sequence version replaced gi:18873939.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center: Washington University Genome Sequencing Center
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                                                                                                                    2 (bases 1 to 59414)
Waligorski, J. and Maupin, R.
The sequence of Homo sapiens BAC clone RP11-621K10
Unpublished (2001)
3 (bases 1 to 59414)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center code: WUGSC
Web site: http://genome.wustl.edu/gsc
Contact: sapiens@watson.wustl.edu
   Toward a complete human genome sequence Genome Res. B (11), 1097-1108 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center project name: H_NH0621K10
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                                                                                                                                                                                                                                                                                                               Direct Submission
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                                                                                                                                                                                                                                                                            Waterston, R.H.
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                                                            99063792
                                                                                              9847074
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                 REFERENCE
AUTHORS
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The clone sequenced to the left is RPI1-157M22, 2000 bp overlap, the clone sequenced to the right is RPI1-266L10, 2000 bp overlap. Actual start of this clone is at base position 79221 of RPI1-157M22; actual end is at base position 33594 of RPI1-266L10.

/organism="Homo sapiens' /mol_type="genomic DNA"

Location/Qualifiers

. .59414

source

FEATURES

bron lon	rpt_f 44	rpt_family=" 884216	/rpt_ramily="L1" 42654749 /rpt_familv="L1"	99. 5435 ot family="AT	15769 t family="(CAT	8407287 rpt family="1	7087743 rpt_family=	447765 pt_family="	pt_famil	rpt fam	rpt_famil	rpt_famil	ryt_famil	rpt_fami	01761 rpt fami	82] :_fami	15101 rpt fami	161211807 - rpt_family="L1"	180 <u>8</u> 1 rpt fami	46. 1219 E family=	21941237 rrpt. familv=	24751288	5 tamily= 901312 Family=	521337 F family-	5113890 f family: 11.	404214070	071683	714817320	87601880	rpt_ramily="MaLR" 889219415	pc_ramlly= 4921970	rpt_ramily="Mik" 060620636 mt_famil:: "mm_mi	/fbc_ramily="Ai_rich" 2081921111 /rpt_family="Alu"
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***, 10 unordered pieces.
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AC114853.
AC114853.4 GI:25072807
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat.)
Rattus norvegicus
Bukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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wg16b07.x1"
27736. .27755
/note="similar to Homo sapiens EST AI740522 (NID:g5108810)
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(NID:g6503670)"
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22594. .22874
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Worley, K.C.
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        Muzny, D. Mazie., Netzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alberooks, S., Amin, A., Agquiano, D., Allen, C., Allen, H., Alberhooks, S., Amin, A., Agquiano, D., Allen, C., Allen, H., Abbrooks, S., Amin, A., Agquiano, D., Anylebechi, V., Bandaranishe, D., Barboran, B., Baden, M., Baca, E., Baden, B., Baden, M., Bada, C., Bada, C., Bada, C., Carden, E., Caracon, E., Cardeno, E., Cardeno, E., Cardeno, E., Cardeno, E., Cardeno, E., Cardeno, C., Corle, C., Davy-Carroll, L., De Anda, C., Deckrich, D., Derago, C., Ding, Y., Dinh, H., Divya, K., Derago, C., Ding, Y., Dinh, H., Divya, K., Chang, S., Dinh, M., Chen, S., Falla, M., Carde, C., Davy-Carroll, L., De Anda, C., Deckrich, D., Prager, C., M., Cabas, S., Pinley, M., Palago, N., Derago, V., Canra, R., Garra, M., Mallor, S., Kally, S., Kally, S., Kally, M., Garra, M., Mallor, M., Mallor, M., Mallor, M., Marla, M., Mallor, M., Marla, M., Mallor, M., Marla, M., Marl
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Submitted (19-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
On Nov 19, 2002 this sequence version replaced gi:23816565.
The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold', individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence
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3 (Dases 1 to 343,188)

Rat Genome Sequencing Consortium.
(bases 1 to 343188)
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may extend beyond the ends of the clone and there may be sequence cortisys within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
                                                                                                                                                                                                                                                                                                                                                                                               (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html)
NOTE: This sequence may represent more than one clone.
NOTE: This is a 'working draft' sequence. It currently consists of 10 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                 Assembly program: Phrap; version 0.990329
Consensus quality: 26870 bases at least Q40
Consensus quality: 270491 bases at least Q20
Consensus quality: 270491 bases at least Q20
Bstimated insert size: 281218; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                 NOTE: Estimated insert size may differ from sequence length
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17949. .19643
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clone_end:T7
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I (bases 1 to 224343, Mile., Abramzon, S., Adams, C., Alder, J., Allen, D., Alsbrooks, S., Amin, A., Anguiano, D., Anyalebechi, W., Aoyagi, A., Ayogi, M., Baca, B., Baden, H., Barahechi, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Banderdanaike, D., Barber, M., Barastead, M., Benahmed, F., Blawalo, K., Blair, J., Blanch, D., Barber, M., Barastead, M., Benahmed, F., Biswalo, K., Blair, J., Blanch, P., Burrell, K., Calderon, B., Cardens, V., Carter, K., Cavazos, I., Censer, H., Center, A., Coxtell, K., Cox, C., Coyle, M., Cree, A., D'Souza, L., Davila, M.L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramc, C., Din, H., Divya, K., Bgan, A., Escotto, M., Eugene, C., Evans, C.A., Falls, T., Fan, G., Fernandez, S., Finley, M., Fugene, C., Evans, C.A., Falls, T., Fan, G., Fersaer, C.M., Gabisi, A., Ganda, R., Gardy, M., Guerre, M., Guevara, M., Gebregeorgis, B., Geer, K., Glill, R., Garda, A., Garner, T., Garza, M., Gabisi, A., Banish, A., Hawes, A., Handerson, N., Hernandez, S., Halland, M., Hamil, C., Hamilton, C., Hamilton, K., Hollins, B., Howells, S., Hullyk, S., Hume, J., Idlebird, D., Jackson, A., Liu, M., Liu, Y., London, R., Johnson, R., Johnson, R., Johnson, R., Johnson, R., Johnson, R., Johnson, R., Lu, J., Liu, M., Liu, M., Liu, M., Liu, M., Martin, K., Martin, K., Martin, K., Martin, E., Mawhiney, S., McLeod, M.P., Moneil, T. Z., Menene, E., Mawhiney, S., Moreod, M.P., Montenayor, J., Morre, S., Moreod, M.P., Morris, K., Morris, K., Morris, K., Morris, S., Moreod, M., Munidasa, M., Murida, M., Mallosa, J., Millesay, M., Millesay, M., Millesay, M., Murida, M., Marin, , S., McLeod, M.P., Morris, M., Morris, M., Morris, M., Morris, S., Moreod, M., Marin, M.
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Rattus norvegicus clone CH230-15A4, *** SEQUENCING IN PROGRESS ***,
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
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HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
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                                                                                                                                                                                                   end_sequence:BZ218560"
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177457. .178312
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Submitted (13-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA.

On Nov 13, 2002 this sequence version replaced gi:22772291.

The Sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.cm.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contigs-scaffold that consist entirely of whole
Nankervis,C., Neal,D., Newton,N., Nguyen,N., Norris,S.,
Nwaokelemeh,O., Okwuonu,G., Olarnpunsagoon,A., Pal,S., Parks,K.,
Pasternak,S., Paul,H., Perez,A., Perez,L., Ffannkoch,C.,
Plopper,F., Poindexter,A., Popovic,D., Primus,B., Pu,L.-L.,
Puazo,M., Quiroz,J., Rachlin,E., Reeves,K., Regier,M.A., Reigh,R.,
Reilly,M., Reilly,M., Ren,Y., Reuter,M., Richer,R., Riggs,F.,
Rives,C., Rodkey,T., Rojas,A., Rose,M., Rose,R., Ruiz,S.J.,
Sanders,W., Savery,G., Scherer,S., Scott,G., Shatsman,S., Shen,H.,
Shetty,J., Shvartsbeyn,A., Sisson,I., Sitter,C.D., Smajs,D.,
Shedty,J., Shvartsbeyn,A., Sisson,I., Sitter,C.D., Smajs,D.,
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Steimle,M., Strong,R., Sutton,A., Svatek,A., Tabor,P., Taylor,C.,
Taylor,T., Thomas,R., Thomas,S., Tingey,A., Trejos,Z., Usmani,K.,
Valas,R., Vera,V., Villasana,D., Waldcon,L., Walker,B., Wang,J.,
Wang,Q., Wang,S., Warren,J., Warren,R., Wei,X., White,F.,
Wright,D., Wright,R., Wu,J., Yakub,S., Yen,J., Yoon,U.,
Yu,F., Zhang,J., Zhou,J., Zhou,X., Zhao,S., Dunn,D., von
Niederhausern,A., Weiss,R., Smith,D.R., Holt,R.A., Smith,H.O.,
Meinstock,G. and Gibbs,R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 224334)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genome shotgun sequence reads. Both end sequences and whole genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          shotgun sequence only contigs will be indicated in the feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Assembly program: Phrap, version 0.990329
Consensus quality: 213159 bases at least Q40
Consensus quality: 215868 bases at least Q30
Consensus quality: 215868 bases at least Q20
Estimated insert size: 221167; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center clone name: CH230-15A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome Center
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JOURNAL
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JOURNAL
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COMMENT

data.html).

Quality coverage: 6x in Q20 bases; sum-of-contigs estimation

NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft_data.hNOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is

arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.

10059: contig of 10059 bp in length

33

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M20136.1 GI:201836

T-cell receptor; beta T-cell receptor; receptor.

Mus musculus (house mouse)

SM Mus musculus (house mouse)

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

E 1 (bases 1 to 982)

S Lee, N.E. and Davis, M.M.

T cell receptor beta-chain genes in BW5147 and other AKR tumors.

Deletion order of murine V beta gene segments and possible 5'

regulatory regions

L J. Immunol. 140 (5), 1665-1675 (1988)
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join (13. . 91,221. . 228)
/gene="Tota"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOUSE DETA-T-cell receptor gene LVD-J-2.5 region, clone BW12. M20136
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 575;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                        229. .>513
/gene="Tcrb"
/product="T cell receptor beta-chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    product="T cell receptor beta-chain"
protein id="pan40398.1"
/db xref="G1:554381"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 9.1%; Score 42.6; DB 10;
1 Similarity 78.5%; Pred. No. 2.6;
51; Conservative 0; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db xref="taxon:10090"
/cell line="BW5147"
/tissue type="thymoma"
join(401, 479,609, 957)
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                .514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol type="genomic DNA"
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                                                                                                                                                                                                                                                                                                                                                                    221. .514
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/note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codon start=1
                                                                                                                                                                                                                                                            .30
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                                                                                                                                                                                                                                                                                                                92. .220
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/number=1
                                 'gene="Tcrb"
                                                                                                                                                                                                                                                                                                                                                                                                                          number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                         Chromosome 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         174 ATAGA 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77 TTAAA 81
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MUSTCRBBA
LOCUS
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VERSION
KEYWORDS
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AUTHORS
TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
Mus musculus
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 575)
1 (bases 1 to 575)
2 (Andresson, S. J., Louie, M.C., Godambe, S.A., Pozzi, M.R.,
Behlke, M.A., Huppi, K. and Loh, D. Y.
Tandem linkage and unusual RNA splicing of the T-cell receptor
Perc. Matl. Acad. Sci. U.S.A. 84 (7), 1992-1996 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MUSTCBVC1 575 bp DNA linear ROD 29-APR-199
Mouse germline T-cell receptor beta-chain gene, V-5.2 region gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 TGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8ource text: Mus musculus (strain C57BL/6) liver DNA.
Location/Qualifiers
1. -575
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ·,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.2%; Score 42.8; DB 2; Length 224334; 75.7%; Pred. No. 2.9;
10159: gap of unknown length
220367: contig of 210208 bp in length
220467: gap of unknown length
222244: contig of 2057 bp in length
22264: gap of unknown length
5 224334: contig of 1710 bp in length
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches 17; Indels
                                                                                                                          1. .224334
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                                                                                                                                                                                                                                                                                                                                                                                                                                 .207771)
                                                                                                                                                                                                                              /note="wgs end extension clone end:T7" complement(2724. .3564) /note="clone boundary clone_end:T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic_DNA"
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8963. .10059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        end_sequence:BH323033"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note="clone_boundary
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10160. .12825
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complement (207015. .
                                                                                                                                                                                             clone="CH230-15A4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M15614.1 G1:201273
T-cell receptor; V-region.
1 of 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53; Conservative
                                                                                                                                                                                                                 . .1723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTGCTGCT 77
                                                                                                                                                                                                                                                                                                                         site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 53; Conserv
                10160
220368
220468
222525
222625
     10060
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                                                                                                                              source
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ACCESSION
VERSION
KEYWORDS
SEGMENT
SOURCE
ORGANISM
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MUSTCBVC1
LOCUS
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AUTHORS
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FEATURES
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ORIGIN

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/protein_id="AAA29052.1"

Mb_xxef="Gu1:158826"

/translation="WASAGDAGAANGSNNVAVVQATVSVSGNISVGDGSPNNNNN

/translation="WASAGDAGAANGSNNVAVVQATVSVSGNISVGDGSPNNNNNNNNNNNNNNNNNNNSNNNNGSTAGSSKGQLPLTPRFTAEEKDVLYTLFHLHEBVIDIKHRKKQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (04-ARR-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CBIO 1SA, UK. E-mail enquiries:
Cambridgeshire, CBIO 1SA, UK. E-mail enquiries:

During sequence assembly data is compared from overlapping:

During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with This sequence was finished as follows unless otherwise noted: all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL603889 145052 bp DNA linear ROD 05-APR-2002
Mouse DNA sequence from clone RP23-407M20 on chromosome 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66 GCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCCAGAAAGTCTC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 THECCHARCCACCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGCTGCTGCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2708;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42.6; D
Pred. No. 2.8;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126 TTCTGCCACTGACGCCC 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL603889.5 GI:20068524
HTG.
                                                                                                                                                                                                                                         <594. .1015
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1096. .1658
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      1747. .2618
/gene="zeste"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 56.9%;
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         number=3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chromosome X.
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AL603889/c
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TITLE
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KEYWORDS
SOURCE
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GGRGYLTCIPISGHSNVWYQQTLGKELKFLIQHYEKVERDKGFLPSRFSVQQFDDYH
SEMDNSALEEDSAMYFCASSLGTGGRHPVLWARHSAPRV"
join (401. . 479, 609. .616)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INV 26-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 ACCTCCCCCAAGCCCCTTTACCTATGCTGCTAACGCTGCTGCTGCTGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               M76700.1 GI:158825

DNA-binding; chromosomal localization; gene regulation;
transvection; zeste protein.

Drosophila virilis

Drosophila virilis

Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 2,vo, Chen,C.S. and Pirrotta,V. Chen,J.D., Chan,C.S. and Pirrotta,V. Conserved DNA binding and self-association domains of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          join(<594. 1015,1096. 1658,1747. 2618)
gene="zeste"
codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .1658,1747. .2618)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                         product="T cell receptor beta-chain"
join(401. .479,609. .616)
gene="Tcrb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DROZSTA 2708 bp DNA li
Drosophila virilis zeste gene, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source text: Drosophila virilis DNA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Drosophila virilis"
mol_type="genomic DNA"
db_xref="taxon:7244"
map="chromosome X"
germline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila zeste protein
Mol. Cell. Biol. 12 (2), 598-608 (1992)
92123185
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 42.6; DE Pred. No. 2.7; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           911. .912 /organism="Mus musculus" upstream of XbaI site.
                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oin(<594. .1015,1096.
gene="zeste"
                                                                                                                                                                                                                                                                                                                       note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'product="zeste"
                                                                                        617. .>955
/gene="Tcrb"
                                                                                                                                                                           <401 .479
/gene="Tcrb"
                                                                                                                                                                                                                                                 'gene="Tcrb"
                                                                                                                                                                                                                                                                                609. .957
/gene="Tcrb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 9.1%;
1 Similarity 78.5%;
51; Conservative
                                                                                                                                                                                                                              180. .608
                                                                                                                                                                                                                number=1
                                                                                                                                                                                                                                                                 number=1
                                                                                                                                                                                                                                                                                                                                                            .902
                                                                                                                                                                                                                                                                                                                                       /number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562 ATAGA 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77 TTAAA 81
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                                                                                                                                                                                                                                                                                                                                                                                                                          102 bp
                                                     sig_peptide
                                                                                    mat_peptide
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                                                                                                                                                                                                                                                                                                                                                        misc_recomb
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ACCESSION
VERSION
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ORGANISM
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LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
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MEDLINE
PUBMED
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FEATURES
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regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats, all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, SMISSPROT; Tr., TREMED; Wp:, WORMPEP; Information on the WORMPEP http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-407M20 is from the RPCI-23 Mouse PAC Library constructed by the group of Pieter de Jong.
For further details see http://www.chori.org/bacpac/home.htm
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SMULDY, D.Marie., Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J.,
Allan, C., Allen, H., Abbrooks, S., Amin, A., Angulano, D.,
Anyalebechi, V., Aoyadi, A., Ayodeji, M., Baca, E., Baden, H.,
Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F.,
Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M.,
Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E.,
Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A.,
Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J.,
Cleveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D. Souza, L.,
Davila, M.L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D.,
Delgado, O., Denson, S., Deramo, C., Dinh, H., Divya, K.,
Egan, A., Escotto, M., Eugene, C., Fvans, C.A., Falls, T., Fan, G.,
Fraser, C.M., Gabisi, A., Ganta, R., Garner, T., Garza, M.,
Gebregeorgis, E., Geer, K., Gill, K., Grady, M., Guerra, W.,
Gunaraene, P., Haaland, W., Hamil, C., Hamilton, C., Hamilton, K.,
Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Jackson, A.,
Hernandez, R., Hines, S., Hladun, S.L., Hodgson, N., Hernandez, J.,
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Hernandez, R., Hanes, S., Hladun, S.L., Hodgson, N., Hoglus, M.,
Hollins, B., Howells, S., Hugh, J., Johnson, R., Johnson, R.,
Jackson, L., Jang, H., S., Kelly, S., Khan, Z., King, L., Kovar, C.,
Karpathy, S., Kelly, S., Kelly, S., Khan, Z., King, L., Kovar, C.,
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Rattus norvegicus clone CH230-287H17, WORKING DRAFT SEQUENCE.
AC128156
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13 ATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGAAACGCTGCTGCTGCTGCTGCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 145052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.1%; Score 42.6; DB 10; 78.5%; Pred. No. 3.3; tive 0; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .145052
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'clone lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:25007826
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Matches 51, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus
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VERSION
KEYWORDS
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SOURCE

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Direct Submission

Submitted (15-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Nov 15, 2002 this sequence version replaced gi:23908235.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the fagure table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold' within each contig-scaffold' by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
    Nowas, C., Kraft, C.L., Lebow, H., Levan, J., Lewis, L., Liu, J., Liu, W., Liu, Y., London, P., Longacre, S., Lopez, J., Inversuhewa, L., Loulseged, H., Lozado, R.J., Lu, X., Malloy, K., Mangum, A., Mahmodartne, M., Mahmoda, M., Malloy, K., Mangum, A., Mantin, M., Martin, K., Martin, K., Martin, E., Montemayor, J., Moore, S., Mayoran, M., Morris, K., Morris, E., Morremayor, J., Moore, S., Nordealemeh, O., Okwuon, G., Olarnpumsagoon, A., Pal, S., Parks, K., Pasternak, S., Paul, H., Perez, A., Perez, L., Pfannkoch, C., Plopper, F., Poinderker, A., Perez, L., Perez, L., Perez, C., Paul, M., Robowit, C., Paul, M., Reill, E., Reilly, B., Reilly, M., Ren, Y., Redlin, E., Reeves, K., Regier, M. A., Reigh, R., Reilly, B., Reilly, M., Ren, Y., Rose, M., Rose, R., Ruiz, S., Shen, H., Shest, C., Scherer, S., Scott, G., Shatsman, S., Shen, H., Shest, Y., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shety, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shety, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shety, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shety, J., Wang, S., Warren, R., Wei, K., Weils, W., Weilson, E., Walderon, L., Walderon, L., Walderon, L., Walderon, L., Walderon, L., Walderon, E., Walderon, L., Yoon, L., Yoon, U., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Yen, J., Yoon, L., Yoon, L., Weinstock, G. and Gibbs, R.A.

M. Unpublished

Z. (bases I to 19921)

M. Direct Submission

M. Direct, Submission

M. Direct, Submission

M. Direct, Submission

M. Direct, Submission

M. Direct, Submission

M. Direct, Submission

M. Shwitter, M. Shirk,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (19-JUL-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

3 (bases 1 to 199221)

Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * NOTE: Estimated insert size may differ from sequence length
* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft_data.html).
* NOTE: This is a 'working draft' sequence. It currently
Li, Z., Liu, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Assembly program: Phrap, version 0.990329
Consensus quality: 186979 bases at least Q40
Consensus quality: 189196 bases at least Q30
Consensus quality: 190602 bases at least Q20
Estimated insert size: 190707; sum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
Lewis, L.,
Levan, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
------- Project Information
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AUTHORS
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Submitted (20-JUL-1997) Department of Molecular Biotechnology, Box Submitted (20-JUL-1997) Department of Molecular Biotechnology, Box 357730 University of Mashington, Seattle, Washington 98195, USA Sequencing methodology, high redundancy shofgun. Based on overlapping cosmids, the precision of this sequence is 99.93. Libraries were derived from two strains but there was no discernable sequence variation between them. This sequence contains numerous internal duplications, especially in the RepeatMasker (available from http://ftp.genome.washington.edu/RW/RepeatMasker.html) Several new http://ftp.genome.washington.edu/RW/RepeatMasker.html) Several new fully classified. Simple sequence repeats were identified with sputhik (available from http://serac.mbt.washington.edu/~chrisa/software/sputnik.html)
The authors thank Christopher Nelson for his gift of cosmids from Dennis Lob's library.
                                                                                            Qin, S.,
                                     11160223
2 (bases 1 to 250611)
2 (bases) Losp, B.F., Boysen, C., Wang, K., Ahearn, M.E., Qin, S., Lee, I., Seto, J., Acharya, C., Ankener, M., Alving, W., Chen, L., Paeper, B., Baskin, D., Jerome, N., Swartzell, S., Gilbert, T., Faust, J., Loretz, C., Bungarner, R. and Hood, L., Sequence of the mouse T cell receptor locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'clone_lib="subcloned from BAC 57B22, Genome Systems
                                                                                                                                                                                                                3 (bases 1 to 250611)
Rowen,L., Smit,A.F.A. and Hood,L.
Comparison of the human and mouse T cell receptor beta and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone lib="Dennis Loh"
34707...76259
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/mol_type="genomic DNA"
/strain="BALB/c"
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/organism="Mus musculus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="cosmid 0742C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone_lib="Kai Wang"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'clone="cosmid M4B2'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="cosmid 79A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /chromosome="6"
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AE000663. AE00052.

AE000663.1 GI:2358069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64 CTGCTGCTGCTGTAAAGGCTCATGCTTGGAGTGGGGGACTGGTCGGTGCCCAGAAAGTC 123
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Chen,F., Rowen,L., Hood,L. and Rothenberg,E.V.
Differential transcriptional regulation of individual TCR V beta segments before gene rearrangement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 TGTTTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTAACGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

1 199221: contig of 199221 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          / Match 9.1%; Score 42.6; DB 2; Length 199221; Local Similarity 58.1%; Pred. No. 3.3; Pred. 75; Conservative 0; Mismatches 54; Indels 0;
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clone_end:T7"
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Mus musculus
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MMAE000663
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/tränslation="WWQFCILCLCVIMASVATDPTVTLLEQNPRWRLVPRGQAVNLRC
ILKNSQYPWMSWYQQDLQKQLQWLFTLRSPGDKEVKSLPGADYLATRVTDTELRLQVA
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Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (Bases I to 261600)
Wilson, R. K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 ACCICCCCAAGCCCCTITACCIATGCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
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Mus musculus chromosome 6 clone RP23-45H9, complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.1%; Score 42.6; DB 10; Length 250611; 78.5%; Pred. No. 3.3; cive 0; Mismatches 14; Indels 0;
                                                             /gene="TCRBV2S1"

/mote="conserved 16mer; possible promoter"

join(13636. .13690,13931. .>14225)

/gene="TCRBV2S1"
                                                                                                                                                                                                                                                     join (13636, .13690,13931, .14225)
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                                                                                                                                                                 protein_id="AAB69045.1"
db_xref="GI:2358073"
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MCPherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (20-JUN-2002) Genome Sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_unit="TA"
15496. .15541
/rpt_family="RSINE2"
15510. .15549
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/note="RSS heptamer"
14233. .14255
/gene="TCRBV2S1"
                                                                                                                                                                                                                                                                                                                                                                                                           /note="RSS nonamer"
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15165. .15209
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13500, 13515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_type=tandem
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rpt_unit="TA"
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rpt_unit="AC"
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Mus musculus
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5373. .15402
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                                                                                                                                                                                                                                                                                       14226. .14232
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16388. .16423
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Best Local Similarity 78.57
Thes 51; Conservative
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//gene="dopamine-beta-hydroxylase-like"
//note="this gene is similar to human
dopamine-beta-hydroxylase by blastx.
complement (join(1134. ...1376,1660. ...1777,2666. ...2796,
4260. .4319,4459. .4555,4795. ...4886,5730. .5896,6070. .6172,
6347. .6514,7296. ...379,7627. ...7188,8276. .8422,9547. ...9834))
//gene="dopamine-beta-hydroxylase-like"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCRB portion begins 6530
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KVEPQDNTPAGFRAVPLALSGSNTATLRPLPMIAVLFLQGSLSCLLAMLQTGV"
/clone_lib="Kai Wang"
/orde="this cosmid is chimeric.
bases into the cosmid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (11710. .12162)
/rpt_family="RMER10A"
13212. .13327
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                                                                      organism="Mus musculus"
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/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
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/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
'mcl_type="genomic DNA"
'strain="BALB/c"
                                                                                                                                                        clone_lib="Dennis Loh"
                                                                                       type="genomic DNA
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clone="cosmid D15"
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/db_xref="taxon:10090"
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family="URR1A"
                                                                                                                                                                                                                                            db_xref="taxon:10090"
clone="cosmid 6.3"
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|clone="cosmid 83.1"
|clone lib="Kai Wang"
207816. .239023
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clone="cosmid 67.2"
clone_lib="Kai Wang"
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/rpt_family="Lx9"
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190216. 220895
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/clone_lib="Kai Wang"
235693. .>250611
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146. .3201
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rpt_unit="ATATA"
                                                                                                     strain="BALB/c"
                                                                                                                                                                                                                         strain="BALB/c"
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/rpt_family="L1"
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3 (bases 1 to 261600)
MCPherson, J. D. and Waterston, R.H.
Direct Submission
Submitted (10-MAY-2003) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
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                                                                                                                                  Submitted (12-DEC-2003) Genome Sequencing Center, 4444 Forest Park Parkway, St. Louis, MO 63108, USA On Dec 12, 2003 this sequence version replaced gi:30522940.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Parkway, St. Louis, MO 63108, USA (Chases I to 139786)
MCPherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (22-OCT-2002) Genome Sequencing Center, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 139786)
Yoakum,M., Kozlowicz,A., Mangiapanello,L., Dignan,G., Haglund,K.
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Mus musculus BAC clone RP24-445C12 from chromosome 3, complete
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 261600;
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l Similarity 78.5%; Pred. No. 3.3;
51; Conservative 0; Mismatches
                                                                                                                                                                                                          Genome Center
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/organism="Mus musculus"
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3 (bases 1 to 139786)
MCPherson, J.D. and Waterston, R.H.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="6"
/clone="RP23-45H9"
                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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Wilson, R.
                                                                                                                                                                                                                                      code: WVGSC
                                                                                                Wilson, R.K.
Direct Submission
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Best Local Similarity
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AC124343/c
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Submitted (13-NOV-2003) Department of Genetics, Washington Submitted (13-NOV-2003) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA On Jan 10, 2003 this sequence version replaced gi:24211432.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mapping information for this clone was provided by Dr. Wes Warren, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The RPCI-24 BAC Library has been constructed by Pieter de Jong and coworkers (http://www.chori.org) from male C57BL/6J mouse spleen and/or brain genomic DNA. The clone and detailed information can be obtained from Pieter de Jong and coworkers at http://www.chori.org
5 (bases 1 to 139786)
Macharson, N.H.
Direct Submission
Submitted (10-JAN-2003) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
6 (bases 1 to 139786)
Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence was finished as follows unless otherwise noted:
                                                                                                                                                                                                                                                                                                                                                                      Center: Washington University Genome Sequencing Center
Center code: WUGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence is the entire insert of the clone. Docation/Qualifiers
1. .139786
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://genome.wustl.edu
Contact: submissions@watson.wustl.edu
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Center project name: M BB0445C12
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/db_xref="taxon:10090"
/chromosome="3"
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1149. .4592
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1454. .1600
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/rpt_family="L1"
|231, 100,
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/rpt_family="L1"
995. .1167
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2273. .2774
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12712 GCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGATTCATGTTTCATATTTTGTTAGTGG 12653
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Homo sapiens chromosome 5 clone RP11-90P14, WORKING DRAFT SEQUENCE,
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DOE Joint Genome Institute.

DOE Joint Genome Institute.

District Submitseion

Submitted (09-JUN-2001) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Aug 25, 2001 this sequence version replaced gi:14333928.

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Center: Joint Genome Institute
Center: Joint Genome Institute
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1. (bases 1 to 155276)
DOB Joint Genome Institute.
Sequencing of Ruman Chromosome 5
Unpublished
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AC091992
AC091992.2 GI:15290436
HTG; HTGS PHASE1; HTGS_DRAFT; HTGS_ACTIVEFIN. Homo sapiens
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Consensus quality: 151184 bases at least Q40
Consensus quality: 153297 bases at least Q30
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52839 . .5328
/rpt_family="ERVK"
53349 . .53400
/rpt_family="B4"
53406 . .53982
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Center Project Name: 441299
                           /rpt_family="B4"
44073. 44417
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45186. 45590
/rpt_family="L1"
/rpt_family="L1"
/rpt_family="L1"
/rpt_family="L4"
/rpt_family="L4"
/rpt_family="L4"
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8075. .48802
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rpt family="Alu"
.2587. .52789
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8808. .50361
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0974. 51573
rpt family="L1"
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Consensus quality: 153815 bases at least Q20
Estimated insert size: 159750; agarose-fp estimation
Cuality coverage: 5.9 in Q20 bases, agarose-fp estimation
Quality coverage: 5.0 in Q20 bases; sum-of-contigs estimation
Quality coverage: 6.07 in Q20 bases; sum-of-contigs estimation
* NOTE: This is a 'working draft' sequence. It currently
* consists of Contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272 AGATAGGGAACAGAAGAGGTAGTGGGTGGCTAGGGGGGGCTGCCTTATTTAAAGTGGTT 331
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

(Dases 1 to 20273)

Abbott,S., Haglund,K., Creason,K. and Schatzkamer,K.

The sequence of Mus musculus BAC clone RP23-296023

Unpublished (2001)

2 (bases 1 to 202733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.1%; Score 42.4; DB 2; Length 155276; llarity 58.9%; Pred. No. 3.7; Conservative 0; Mismatches 51; Indels 0;
                                                                                                                                                                                                                                                     7359: contig of 7359 bp in length
7459: gap of unknown length
17406: contig of 9847 bp in length
17406: gap of unknown length
37466: contig of 20060 bp in length
37466: gap of unknown length
57351: contig of 19785 bp in length
57451: gap of unknown length
91524: contig of 34073 bp in length
91524: contig of 34073 bp in length
155276: contig of 63652 bp in length
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/clone_lib="RPCI human BAC library 11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51;
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3 (bases 1 to 202733)
McPherson, J. D. and Waterston, R.H.
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University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
On Feb 2, 2003 this sequence version replaced g1:24943041.
                                                  Parkway, St. Louis, NO 63108, USA
4 (bases 1 to 202733)
WCPherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (13-NOV-2002) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
MCPherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (02-FBS-2003) Genome Sequencing Center, 4444 Forest Park
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Submitted (25-MAY-2002) Genome Sequencing Center, 4444 Forest Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats, all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The RPCI-23 BAC Library has been constructed by Kazutoyo Osegawa and Minako Tateno in the laboratory of Pieter de Jong (http://www.chori.org) from female C57BL/61 mouse kidney and/or brain genomic DNA. The clone and detailed information can be obtained from Research Geneiics, Inc. (http://www.resgen.com) or Pieter de Jong and coworkers at http://www.chori.org
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This sequence is the entire insert of the clone. This clone is
overlapped by AC124343.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
Submitted (08-NOV-2003) Department of Genetics, Washington
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Contact: submissions@watson.wustl.edu
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1764. _1833
/rpt_family="L1"
2944. _3123
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/rpt_family="L1"
3641. .3745
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AUTHORS
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Parkway, St. Louis, MO 63108, USA
On Oct 12, 2002 this sequence version replaced gi:22475561.
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9.1%; Score 42.4; DB 2; Length 203124;
Best Local Similarity 72.4%; Pred. No. 3.7;
Matches 55; Conservative 0; Mismatches 21; Indels 0;
                                                                                                                                                                                                                                                                                   Sequencing vector: plasmid; 100% Chemistry: Dye-primer ET; 0% of reads Chemistry: Dye-primer ET; 0% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.990319 Consensus quality: 200807 bases at least Q40 Consensus quality: 201808 bases at least Q20 Insert size: 226000; agarose-fp Insert size: 203907; sum-of-contigs Quality coverage: 12.19 in Q20 bases; sum-of-contigs Quality coverage: 12.19 in Q20 bases; sum-of-contigs
                                                                                      Center: Washington University Genome Sequencing Center
Center code: WIGSC
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10802: gap of unknown length
29554: contig of 18752 bp in length
29654: gap of unknown length
92108: contig of 62454 bp in length
92208: gap of unknown length
203124: contig of 110916 bp in length.
                                                                                                                                Web site:http://genome.wustl.edu/gsc/index.shtml
Contact: submissions@watson.wustl.edu
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92209. .203124
/note="assembly_name:Contigl4"
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/organism="Mus musculus"
                                                                      Genome Center
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/chromosome="UNK"
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Baylor Plaza, Houston, TX 77030, USA.
On Nov 19, 2002 this sequence version replaced gi:23322236.
The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the fature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold'). Within each contig-scaffold'). Within each contig-scaffold' by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: Bstimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently consists of 13 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Consensus quality: 206076 bases at least Q40
Consensus quality: 209800 bases at least Q30
Consensus quality: 212212 bases at least Q20
Estimated insert size: 201535; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
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4240: gap of unknown length
14717: contig of 10477 bp in length
14817: gap of unknown length
202669: contig of 187852 bp in length
218085: contig of 18785 bp in length
218085: contig of 18316 bp in length
218185: gap of unknown length
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230256: gap of unknown length
231359: contig of 1103 bp in length
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of 4832 bp in length
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Contact: hgsc-help@bcm.tmc.edu
Contact: hgsc-help@bcm.tmc.edu
Contact: project Information
Center project name: GWTQ
Center clone name: CH230-436119
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232804: contig of 1345 bp
232904: gap of unknown len
234228: contig of 1324 bp
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    .234228
    /organism="Rattus norvegicus"

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AL106008 Drosophil AW485179 64383 MAR AL103735 Drosophil BX374796 BX374796 BY086456 BX394796 BX381320 AL064073 Drosophil AL059666 Drosophil AL057462 Drosophil AL057462 Drosophil AL057462 Drosophil AL057472 Drosophil BH396372 AG-ND-159 AL056652 Drosophil BA447727 BNOW132TR CD342739 BLESTEE56 CD659850 BEESTEE57 AL066705 Drosophil BX34917 BX334917 CD66017 BEESTEE38 BX3360796 BX360796 CD142464 tigr-gss-	9	728 bp mRNA linear BST 20-FEB-2003		niata: Vertebrata: Enteleostomi:	rthini; Hominidae; Homo. M.B. approaches to facilitate g		Iowa City, IA 52242, USA	sh, University of Iowa Bento Soares, University of Iowa	rsity of] of lowa rom Resean	g cDNA	23-0-UI"
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organ: Lung, Vector: pT7T3-Pac (Pharmacia) with a dd polylinker; Site 1: EcoR 1; Site 2: Not I; St 1 is a normalized cDNA library containing the normalized cDNA library containing the first an ormalized cDNA library containing the norted according to Bonaldo, Lennon and Soares, Research, 6:791-806, 1996. First strand cDNA is was primed with an oligo-dT primer containing a site. Double stranded cDNA was ligated to an EcoR I; digested with Not I, and cloned directionally 77T3-Pac vector. The oligonucleotide used to prime thesis of first-estand cDNA contains a library tag that is located between the Not I site and the trail. The sequence tag for this library is
=""Adult and Fetal"
"DH10B (Life Technologies) (T1 phage resistant)"
="UT-CF-RC1"
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Brn23 Homo sapiens cDNA clone IMAGE:3306072 3'
element OFR repetitive element ;, mRNA
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                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
Ph.D.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 555)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NAtional Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 462.2; DB 10; Length 555;
Pred. No. 3.2e-110;
0; Mismatches 3; Indels 0;
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                                                                                                                                                                                                                                                                                                                                                               1.555
/organism="Homo sapiens"
/mol_type="manna"
/db_xre="taxon:9666"
/clone="IMAGE:3306072"
/tissue_type="glioblastoma (pooled)"
                                                                                                                              Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                          info@inage.llnl.gov
Seg primer: -40UP from Gibco
High quality sequence stop: 472.
Location/Qualifiers
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AI871469 482 bp mRNA linear EST 07-MAR-2000 w167d09.x1 NCI CGAP Brn25 Homo sapiens cDNA clone IMAGE:2429969 3' similar to contains element TAR1 repetitive element ;, mRNA
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DNA Sequencing by: Mashington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 14009 Std Exror: 0.00
Seq primer: -400P from Gibco
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/tissue_type="anaplastic oligodendroglioma"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contract: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mamalla, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (Dases 1 to 482)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
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48 AGATICITCIGIGIAAAIAIGICCITIAAAAAAAAAGCIG
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99.8%; Pred. No. 1.3e-108;
iive 0; Mismatches 0;
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Location/Qualifiers
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/db_xref="taxon:9606"
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
CDNA Library Preparation: Dr. M. Bento Soares, University of Iowa CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa DNA Sequencing by: Dr. M. Bento Soares, University of Iowa CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: (Ione distribution information can be obtained from Dr. M. Bento Soares, bento-soares@ulowa.edu
The following repetitive elements were found in this cDNA sequence: 409-448, > (CAG) n#Simple_repeat
Seq primer: M13 FORWARD
POLYA-Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /Glone="UU-H-DTH-ENGLISTONG"
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/note="Organ: Lung; Vector: pT773-Pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I;
NCI_CGAP_DTH is a normalized cDNA library containing the following tissue(s): Metastatic Chondrosarcoma in Lung.
The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligoniclectide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     517 bp mRNA linear EST 08-NOV-2002
NCI_CGAP_DT1 Homo sapiens cDNA clone
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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NCI-CGAP http://www.ncbi.nlm.nih.gov/nciogap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAAGCCCAGCCCCGTGGGGAAGGG
                                         GAG-AAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAGAGGGTAGTGGGT
                                                                                                                                         228 GAGAAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGT
                                                                                                                                                                                                                                                                                          360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTA
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UI-H-DT1-awl-m-06-0-UI 3', mRNA sequence.
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/mol_type="mRNA"
/db_xref="taxon:9606"
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EST 26-MAR-2002
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Signary Arrayed by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov
sequence: 409-448, > (CAG)n#Simple_repeat
Seg primer: Ml3 FORWARD
POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128 CAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTG 69
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

    (bases 1 to 668)

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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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UI-H-EII-aza-n-02-0-UI.s1 NCI_CGAP_EII Homo sapiens CDNA clone
IMAGE:5846209 3', mRNA sequence.
                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                 Length 517;
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library is AACTGTTCGG.
AGG TISGUB=lung metatastic chondrosarcoma
TAG LIB=UT-H-PT1
TAG_EBQ=AACTGTTCGG"
                                                                                                                                                                                                                                             Indels
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0
                                                                                                                                                                                 ; DB 14;
4.5e-108;
                                                                                                                                                                                 Score 454; DB
Pred. No. 4.5e
0; Mismatches
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                                                                                                                                                                           Query Match
Best Local Similarity 99.4%;
Matches 467; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
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Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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Location/Qualifiers

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                                            ORGANISM
                                                                                                                           AUTHORS
TITLE
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COMMENT
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                                                                                                         REFERENCE
    KEYWORDS
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                                                                                                                                                          /done lib="NOT CARP Ell"
/done lib="NOT CARP Ell"
/dote="Organ: Left Pelvis; Vector: pT7T3-Pac (Pharmacia)
with a modified polylinker; Site 1: SecR 1; Site 2: Not I;
NOT CGAP Ell is a normalized cDNA library containing the
NOT CGAP Ell is a normalized cDNA library containing the
Collowing tissue(s): Chondrosarcoma. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
Synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pT7T3-Pac vector. The cligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT) B tail. The sequence tag for this library is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            488 CAATGITTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  368 AAAGICITCIGCCACIGACGCCCCCAICAGGGAIIGGGCCIICIIIICCCCCTIII
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                  /tissue_type="Chondrosarcoma"
/dev_stage="Adult"
/lab_host="DH10B (Life Technologies)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 454; DB 12;
Pred. No. 4.9e-108;
0; Mismatches 0;
                                                                                /clone="IMAGE:5846209"
/tissue_type="Chondrosarcoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAG_TISSUE=chondrosarcoma
TAG_LIB=UI-H-EI1
TAG_SEQ=ACACTTGCAC"
                      organism="Homo sapiens"
                                        'mol_type="mRNA"
'db xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 467
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source
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AI149981/c
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AI149981 450 bp mRNA linear EST 10-NOV-1998 qf38h10.xl Soares testis NHT Homo sapiens cDNA clone IMAGE:1752355 3' similar to contains element PTR5 repetitive element ;, mRNA

AI149981 AI149981.1 GI:3678450

ACCESSION VERSION

seguence.

DEFINITION

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DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:
www.bio.llnl.gov/bbrp/image.html
Insert Length: 718 Std Error: 0.00
Seq primer: -40ml3 Fwd. ET from Amersham
High quality sequence stop: 417.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Double-stranded cDNA, was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. Library went through one round of normalization to Cot5, and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clome_lib="Soares_testis_NHT"
hote="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site1: Not I; Site 2: Eco RI; 1st strand cDNA
was prepared from mRNA obtained from Clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia; Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 450)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                                                                                                                                                                     cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
Bonaldo, Ph.D.
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Pred. No. 2.9e-106;
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al Similarity 100.0%; Pred. No. 2.5
447; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                       Ph.D.
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/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, F
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab host="DH10B"
EST.
Homo sapiens (human)
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/tissue_type="PLACENTA"
/clone_lib="Homo sapiens PLACENTA"
/clone_lib="Homo sapiens"
/clone_li
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                                                                                                                                                                                                                                                            368 AAAGTOTOTOTOCCACTGACGCCCCATCAGGGATTGGGCCTTCTTTCCCCCTTCTTT 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188 GTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATA 129
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Genoscope - Centre National de Sequencage
BP 191 91006 EWRY cedex - France
Email: seqrefégenoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSOBAK025CH09NM1&cluster=10757.r. Contact
cgi-bin/cluster.cgi?seq=CSOBAK025CH09NM1&cluster=10757.r. Contact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                             CTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCCAG
                                                                                                                      428 crecrecrecrecrecrecrerranaeccrearecresagresesacresacres
                                                                                                                                                                                              CTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAAGCCCCGTGGGGAA
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http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOBAKO25CH09NM1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68 TAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAAAAGCTG 19
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODE009YJ24"
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Tissue Procurement: Dr. Jose Mercuende
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
                                                                                                                                                                                                                                                                                                                                                      CA438256 687 bp mRNA linear BST 08-NOV-2002 UI-H-DT1-avw-g-05-0-UI.sl NCI CGAP DT1 Homo sapiens cDNA clone UI-H-DT1-avw-g-05-0-UI 3', mRNA sequence.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
I (bases I to 687)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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/note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified pollylinker; Site_1: Book I; Site_2: Not I;
NCI_CGAP_DTI is a normalized CDNA library containing the following tissue(s): Metatastic Chondrosarcoma in Lung.
                                       90 TTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATAT 31
1 CAATGITIGCCIAICCACCICCCCCAAGCCCCTITACCIAIGCIGCIGCIAAC---GCIG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from Dr. M. Bento Soares, bento-soares@ulowa.edu
The following repetitive elements were found in this cDNA
sequence: 409-448, > (CAG)n#Simple_repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4,
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TAG_LIB=U1-H-DT1
TAG_SEQ=AACTGTTCGG"
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'tissue_type="Metastatic Chondrosarcoma"
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|lab_host="DH10B (Life Technologies)"
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98.9%; Pred. No. 1.8e-104;
live 0; Mismatches 1;
                                                                                                               441 GICTITATAATAAACAGTTAAAAGCTG 467
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/db_xref="taxon:9606"
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Site 2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NDHM, pregnant uterus NDHPU, and fetal heart NDHHPISM) were mixed, and sa circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223,
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zk85f07.rl Soares pregnant_uterus_NbHPU Homo sapiens cDNA clone
IMAGE:489637 5' similar to contains element PTR5 repetitive element
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Bukaryota, Metzaca, Chordata, Craniata, Vertebrata, Euteleostomi,

Bukaryota, Metzaca, Chordata, Catarrhini; Hominidae, Homo.

(Dases 1 to 431)

Hiller, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B.,

Chissoe, S., Dietrich, N., Dubuque, T., Favello, A., Gish, W.,

Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N.,

Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rikin, L.,

Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rikin, L.,

Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R.

and Marra, M.
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                                                                                                                                                                                                                                                       Length 437;
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                                                                                                                                                                                                                                                       90.5%; Score 422.8; DB 9;
99.5%; Pred. No. 6.4e-100;
iive 0; Mismatches 2;
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102 AGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGB:2114172"
/tissue_type="Pooled human melanocyte, fetal heart, and
pregnant uterus"
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/clone lib="Soares NhHMPu Sl"
/hote="organ: mixed (see below); Vector: pT7T3D-Pac
(Pharmacia) with a modified polylinker; Site_1: Not I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Straugherg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
INAGE Consortium (info@mage.llnl.gov) for further information.
Insert Length: 551 Std Error: 0.00
Seq primer: -40UP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAGCCCCGTGGGGAAGGG
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                     13;
                                          5.1e-101;
                  DΒ
              ; Score 427.4; I
; Pred. No. 5.1e-
0; Mismatches
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db_xref="taxon:9606"
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              91.5%;
Local Similarity 97.8%;
les 455; Conservative
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IMAGE:489637 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="adult"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                     Email: est@watson.wustl.edu
            AA101878
AA101878.1 GI:1645281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex="female
                                                      Homo sapiens (human)
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                                                                                                                                                                                                                    and Marra, M.
                                                                       Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 367 TAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTG 426
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                                                                                                                                                                                                                                                                                             /clone lib="Soares pregnant uterus NbHPU"
/note="Organ: uterus; Vector: pT/T3-Pac; Site_1: Not I
Site_2: Eco RI; 1st strand cDNA was primed with a Not
                                                                 Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Leugth: 528 Std Error: 0.00
Seq primer: -28M13 rev2 from Amersham.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATAT
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         Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90.0%; Score 420.2; DB 9; Length 431; 99.3%; Pred. No. 3.1e-99; ive 0; Mismatches 3; Indels 0
                                                                                                                                                                           organism="Homo sapiens"
                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="GDB:3804224"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                     /clone="IMAGE:489637"
                                                                                                                                                                                                                                                                                                                                          primer [5'
                                                                                                                                                                                                                                                                 /dev_stage="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                      /sex="female"
                                                                                                                                                                                                                                                                                                                                         oligo(dr)
 Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422; Conservative
                                                                                                                                                           .431
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LOCUS
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B., Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W., Hawkins,M., Hulkman,M., Kucaba,T., Lacy,M., Le,W., Le,N.; Ech. Mardis,E., Moore,B., Morris,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J., Travaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R., Markey, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone lib="Soares pregnant_uterus NbHPU"
/note="Organ: uterus; Vector: pT7T3-Pac; Site 1: Not I;
Site_2: Eco RI; 1st strand cDNA was primed with a Not I
oliqo(dT) primer [5'
                                                                                                                                                                                                                                                                                                                              Generation and analysis of 280,000 human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This clone is available royalty-free through LLNL; contact the IMAGE consortium (info@image.llnl.gov) for further information. Insert Length: 528 Std Error: 0.00 Seg primer: -40Ml3 fwd. from Amersham.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ceccarcagggarraggectretreecectrecritergrateroreneration
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AACTGGAAGAATTCGGGCGGCGCTTTTTTTTTTTTTTT 3']
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
Washington University School of Medicine
H444 Forest Park Parkway, Box 8501, St. Louis, MO
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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constructed by M. Fatima Bonaldo."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:489637"
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TAG_TISSUE=brain
TAG_LIB=NCI_CGAP_Brn23
TAG_SEQ=ATATC"
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al Similarity 98.6%;
421; Conservative
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Best Local Similarity
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/note="Vector: p7735-Peac (Ph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
The sequence contained an Oilgo-dT track that was present in the oilgounclectide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. cDNA library Preparation: M.B. Soares Lab Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G. Consortium/LIMLA at:

www-bio.llnl.gov/bbrp/image/image.html The following repetitive elements were found in this cDNA sequence: 408-447,
CAG)n#Simple repeat
Seq primer: MJ3 Forward
POLYA-Yes.
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                                                                                                                                                                                                                     TTAAGAAATTGTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATAT 440
TTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCA 380
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/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                GICTITATAATAAACAGTTAAAAGCIG 467
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UI-H-BIOD-aba-e-12-0-UI.81 NCI_CIMAGE:2711158 3', mRNA sequence.
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1492104-1493255) NCI CGAP LUS pool 1 LLAM 3575-3582, 3851-3854 [IMAGE CloneIDs 141420-1417991, 1520904-1522439] NCI CGAP GC4 pool 1 LLAM 3164-3167, 3716-3720, 3733-3735 [IMAGE CloneIDs 1257096-1258631, 1465064-1470983, 1475592-1476743) NCI CGAP F722 pool 1 LLAM 2457-2459, 2758-2759, 3062-3068 [IMAGE CloneIDs 985608-986759, 110192-1101959, 1217928-1220615) NCI CGAP F722 pool 1 LLAM 2644-2653, 2871-2872 [IMAGE CloneIDs 985608-986759, 110192-1101959, 1217928-1220615) NCI CGAP Colo pool 1 LLAM 2644-2653, 2871-2872 [IMAGE CloneIDs 1057416-1061255, 1144584-1145351) The resulting subtracted library contained 4 million recombinants. Subtraction was performed as previously described [Bonaldo, Lennon & Soares (1996): Normalization and Subtraction: Two Approaches To Facilitate Gene Discovery.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 428)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Pred. No. 1.7e-98;
0; Mismatches 6
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clone CS0DI012YI10 3-PRIME, mRNA sequence.
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                                                                                   Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                          /dlone lib= NGI CGAP Kidl!"
/note="Organ: Kidney; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site=1: Not 1; Site=2: ECO RI; Plasmid DNA from the normalized library NGI CGAP Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (GONBELDS 1322376-1323911, 1456007-1456775, and Patima Bonaldo. "Subtraction by Bento Soares and M.
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Emmail: cgapbs-r@mail.nih.gov.
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clond distribution: NCT-CGAP clone distribution information can be
info@lmage.llnl.gov
info@lmage.llnl.gov
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AL570843 Homo sapiens PLACENTA COT 25-NORWALIZED Homo sapiens cDNA
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                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3134372"
/lab_host="DH10B"
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Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Bail: seqref@genoscope.cns.fr, web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODI012BEOSNP1&cluster=10757.r. Contact:
Feng Liang Email: fliang@lifetech.com URL:
http://fullength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODI012BEOSNP1.
Homo sapiens
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaila; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 1201)
Li, W.B., Gauber, C., Jessee, J. and Polayes, D.

Full.length cDNa libraries and normalization
Unpublished (2001)
On Feb 16, 2001 this sequence version replaced gi:12927548.
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/clone lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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Pred. No. 2e-95;
6; Mismatches 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DI012Y110"
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Page 11

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EST 24-MAY-1995
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                                                                                                                                                                                                                                                                                                                                             R60026
yh12c03.s1 Soares infant brain 1NIB Homo sapiens cDNA clone
IMAGE:43014 3' similar to contains MSR1 repetitive element ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       double-stranded cDNA was ligated to Hind III adaptors (Pharmacia), digested with Not I and directionally cloned into the Not I and Hind III sites of the Lafmid BA vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo."
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     166 AGGGGGCCTGCCTTATTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGAT 107
                                                                                                        106 ATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTAAAGAT 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Enkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Enkaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 422)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482 CCAANTTTGCCTAACCACCTCCCCAACCCCTTTACCTAATGCCTGCTGCTAAAGCTGCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This clone is available royalty-free through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                       365 ATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTGTTCCAATGTTTGTAAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CAATGTTTGCCTATCCACCTCCCCAAGCCCCTTTACCTATG~CTGCTGCTAACGCTGCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wilson, R.
The Washi-Merck EST Project
Unpublished (1995)
Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Enail: est@watson.wustl.edu
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84.5%; Score 394.6; DB 14; Length
Best Local Similarity 94.9%; Pred. No. 1.7e-92;
Matches 447; Conservative 0; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev stage="73 days post natal"
/lab_host="DH10B (ampicillin resistant)"
/clone_lib="Soares infant brain INIB"
                                                                                                                                                             425 TGTTCTGTGTAAATATGTCTTTATAATAAAGGTG 467
                                                                                                                                                                                                                    4
                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB:415555"
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Source: IMAGE Consortium, LLNL
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/clone="IMAGE:43014"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: SP6
High quality sequence stop: 3
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
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R60026.1
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JOURNAL
COMMENT
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R60026/c
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VERSION
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AUTHORS
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/clone lib="NCI CGAP_Kid11"
/clone lib="NCI CGAP_Kid11"
/clone lib="NCI CGAP_Kid11"
/note="Organ: kidney; Vector: pT713D-Pac (Pharmacia) with a modified polylinker; Site 1: Not I; Site 2: Ecc RI; Plasmid DNA from the normalized library NCI CGAP Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified counse from a pool of 5,000 clones made from the same library (clonelDs 132376-1323911, 1456007-1456775, and 1500552-1502855). Subtraction by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Ph.D., Ph.D., Ph.D., CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Mashington University Genome Sequencing Center
Clone distribution: NI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLML, send email to:
info@image.llnl.gov
Seq primer: -40UP from Gibco.
Location/Qualifiers
                                                                                                                            BE463932 406 bp mRNA linear EST 27-JUL-2000 hx83b11.x1 NCI_CGAP_Kidl1 Homo sapiens cDNA clone IMAGE:3194397 3',
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Matches 399; Conservative 0; Mismatches 4; Indels
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/clone="IMAGE:3194397"
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20 TAAAGATTGADGTGGTAAA
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Ota,T., Nishikawa,T., Suzuki,Y., Ishii,S., Saito,K., Kawai,Y., Yamamuco,J., Wakamatsu,A., Ozawa,M., Nakamura,Y., Nagai,T., Sugano,S. and Isogai,T.)
HRI human cDNA project (Ota,T., Nishikawa,T., Suzuki,Y., Ishii,S., Saito,K., Kawai,Y., Yamamoto,J., Wakamatsu,A., Ozawa,M., Nakamura,Y., Nagai,T., Sugano,S., Isogai,T.)
Unpublished (2000)
Contact: Takao Isogai
Genomics Laborazory
                              117
                                                            GCTGCTGCTGCTGCTTAAAAGGCTCATGCTTGGAGTGGGGAACTGGTCGGTGGTCCCAG 363
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Catarrhini; Hominidae; Homo.
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1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
1513-3 Yana, Kisarazu, Chiba 292-0812, Japan
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Mammalia; Eutheria; Primates;
1 (bases 1 to 403)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E (bases 1 to 414)

S ikela,J.M.

Human cDNAs from infant brain

L Unpublished (1993)

Contact: Sikela JM

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University of Colorado Health Sciences Center
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Email: nikki@tally.uchsc.edu
Seq primer: -21M13 Universal.
Location/Qualifiers
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/clone_lib="Infant brain, LLNL array of Dr. M. Soares
1NIB"
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Pred. No. 1.2e-91;
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1 (bases 1 to 396)
Hillier, L. Lennon, G., Becker, M., Bonaldo, M. F., Chiapelli, B., Chisoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Parange, C., Rikin, L., Rohlfing, T., Schellenberg, K., Soares, M. B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwood, K., Mohldmann, P., Materston, R., Wilson, R., Malson, R., Mal
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Washington University School of Medicine
4444 Porest Park Parkway, Box 8501, St. Louis, MO 63108
4442 134 286 1800
Fax: 314 286 1810
Email: est@wastson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@mage.llnl.gov) for further information.
Seg primer: -40M13 fwd. from Amersham.
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/db_xref="GDB:3928326"
/db_xref="taxon:9606"
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/lab_host="Numbil:cal vein, 1 passage"
/lab_host="SOLR (kanamycin resistant)"
/clone_lib="Stratagene endothelial cell 937223"
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Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 13, 91006 ENTX redex - France
BP 13, 91006 ENTX redex - France
Email: seqref@genoscope.ors.fr Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODI022AB12NP1&cluster=10757.r. Contact:
Feng Liang Email: fliang@lifetech.com URL:
http://tulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope squence ID: CSODI022AB12NP1.
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Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                           275 GGCCTGCCATGACCTGCAGCCCAAGCCCGAGCCCGTGGGGAAGGGGGAAAGTGGGGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          317 TTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAGGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155 TTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAAGGCCCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Whill-length CDNA libraries and normalization
Unpublished (2001)
On Feb 16, 2001 this sequence version replaced gi:12927452
                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                        Length 396;
                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                     82.4%; Score 384.6; DB 9;
99.0%; Pred. No. 6.5e-90;
ive 0; Mismatches 4;
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AL570794 Homo sapiens FLACENTA COT 25-NORM
clone CSODI022YC23 3-PRIME, mRNA sequence.
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Mammalia, Eutheria, Primates,
1 (bases 1 to 977)
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distribution: NCI-CGAP clone distribution information can be
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_CGAP_P16 Homo sapiens cDNA clone
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 356)
NCI-CRAP http://www.ncbi.nhm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                           found through the I.M.A.G.E. Consortium/LLNL at:
image.llnl.gov/image/hlml/iresources.shtml
Seq primer: -40UP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                            cell tumors"
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UT-1-BB1p-aus-e-04-0-UI.sl NCI CGAP P16 Ho
UI-1-BB1p-aus-e-04-0-UI 3', mRNA sequence.
BQ024597
BQ024597.1 GI:19759876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                     /clone="IMAGE:2949749"
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                                                                                                                                                            /mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               467
                                                                                                                                         /organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447 ATAATAAACAGTTAAAAGCTG
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/mol_type="mRNA"
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/clone="CSODIO22YC23"
/tissue type="HDACENTA COT 25-NORMALIZED"
/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and SoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                             118
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  388 recrecrecrecrecrecrevanaedercanecresaereedakereereereecenea 329
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Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael
R. Emmert-Buck, M.D., Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mamaalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

Masses 1 to 3 http://www.ncbi.nlm.nih.gov/nciogap.

NCI-CGAP http://www.ncbi.nlm.nih.gov/nciogap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 TGTRTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAAGCCCAGCGTGGTGGAAG
                                                                                                                                                                                                                                                                                                                                    CAATGITTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTA--ACGCTGC
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                                                                                                                                                                                                                                               Length 977;
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llarity 95.5%; Pred. No. 9.7e-89;
Conservative 3; Mismatches 13;
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Bonaldo, Ph.D.

CUDA Library Arrayed by: Greg Lennon, Ph.D.

CUDA Library Arrayed by: Greg Lennon, Ph.D.

COND Library Arrayed by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
fround through the I.M.A.G.E. Conscrtium/LLNL at:

Mow-bio.llnl.gov/bbrp/image.html

Insert Length: 517 Std Brror: 0.00

Seq primer: 400P from Gibco

Seq primer: 400P from Gibco

High quality sequence stop: 312.
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                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoston Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 612)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          329 cccccccacaggg-rrgggccrrcrrrcccccrrcrrc--rgrrcrcrccrccrcarcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198 GCCTGCCATGACCTGCAGCCCAAGCCCCGTGGGGAAAGGGGGAAAAGTGGGGATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:2432549"
/tissue_type="anaplastic oligodendroglioma"
/lab_host="DH108"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                   Ph.D.
                                                                                                                                                                                                                                                                                    (CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
Contact: Robert Strausberg, Ph.
                                                   AI886944.1 GI:5592108
                                                                                                    (human)
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         sednence.
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                                                                                                                                                                                                                                                                                                                                                                                                                 /dev stage="Full Term"
//lab_host="DH10B (Life Technologies)"
//lab_host="DH10B (Life Technologies)"
//clone_lib="MCI (CGAP_PI6"
//note="Organ: Placenta; Vector: pT7T3-Pac (Pharmacia) with
a modified polylinker; Site 1: EcoR I; Site 2: Not I;
NCI CGAP_PI6 is a subtracted cDNA library constructed
according to Bonaldo, Lennon and Soares, Genome Research,
6:791-806, 1996. First strand cDNA synthesis was primed
with an oligo-dT primer containing a Not I site. Double
stranded cDNA was ligated to an EcoR I adaptor, digested
with Not I, and cloned directionally into pT7T3-Pac
vector: The oligonuclectide used to prime the synthesis of
first-strand cDNA contenins a library tag sequence that is
located between he Not I site and the (dT)1B tail. The
sequence teas for this library are GA, AGGAA. For
additional information, contact: Bento Soares,
                                         Email: cgapDs-r@mail.nib.gov
Tissue Procurement: Dr. Steven Brown
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
from Dr. M. Bento Soares, bento-soares@uiowa.edu
POLYA-Yes.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dento-soares@uiowa.edu
TAG TISSUE-placenta human full term
TAG LIB=UT-1-BBlp
TAG SEQ=AGGAA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467
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                                                                                                                                                                                                                                                                                                                                                                               /clone="UI-1-BBlp-aus-e-04-0-UI"
/tissue_type="Placenta"
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                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/db_xref="taxon:9606"
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Best Local Similarity 100.
Matches 338; Conservative
Unpublished (1997)
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         502 TGGGAGATAGGGAACAGAAGAGGGTAKTGGGTGGGCTAGGGGSSCTGCCTTATTTAAAGT 543
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: arkerlav@tigr.org
Information and expression
Information rated to this EST, please check the TIGR Human Gene
Index (http://www.tigr.org/tdb/hgi.html)
Seg primer: M13-21.
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/tissue type="placenta"
/dev_stage="fetua"
/clone_lib="lacenta I"
/note="Organ: placenta; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: EcoRI"
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                        328 GGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAA
                                                                                                                      542 GGTTGTTTATGATTGTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAA
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Adams, M.D., Soares, M.B., Kerlavage, A.R., Fields, C. and Rapid cDNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library Nat. Genet. 4, 373-380 (1993)
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EST78761 Placenta I Homo sapiens cDNA, mRNA sequence.
AA167347
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9712 Medical Center Drive, Rockville, MD 20850 USA
Tel: 3018699056
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/mol_type="mRNA"
/db_xref="ATCC (inhost):172380"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 269; DB 9;
Pred. No. 1.2e-59;
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Contact: Kerlavage, AR
Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA367347.1 GI:2019967
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Matches 269; Conservative
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AA367347/c
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AL571908 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens CDNA clone CSODI029YL01 3-PRIME, mRNA sequence.
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1 (bases I to 1200)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr
library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
http://www.genoscope.cns.fr/
ggi-bin/cluster.cgi?seq=C80D1029CF0INPl&cluster=10757.r. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen.Corporation 1600
92 TCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAA 33
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/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="cSonDro29yL01"
/tissue type="PLACENTA COT 25-NORMALIZED"
/clone lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone lib="
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                               TAIGICITIATAATAACAGTTAAAAGCTG 467
                                                                                                                                   TATGTCTTTATAATAACAGTTAAAAGCTG 3
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1 (bases 1 to 334)

2 Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A.,

1 (bases 1 to 334)

Bult, C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D.,

White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wan, C.,

Clayton, R.A., Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D.,

Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S.,

Glodek, A., Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, E.S., T.,

Kelley, J.M., Kelley, J.C., Liu, L.-I., Marwaros, S.M., Merrick, J.M.,

Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M.,

Fhillips, C.A., Kyder, S.E., Scott, J.L., Saudek, D.M., Shirley, R.,

Bednarik, D.D., Cao, L., Cepeda, M.A., Coleman, T.R., Collins, E.J.,

He, W.W., Hu, J.S., Greene, J.M., Fischer, C., Hastings, G.A.,

Bullion, J., Fannon, W.R., Rosen, C.A., Hastings, G.A.,

Bullion, Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M.,

Bullion, D.J., Fannon, M.R., Rosen, C.A., Haseltine, M.A., Fields, C.,

Fraser, C.M. and Venter, J.C.

Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of CDNA sequence
                                                                                                                                                                                                                                   334 bp mRNA linear EST 18-APR-1997 EST17255 Aorta endothelial cells, TNF alpha-treated Homo sapiens cDNA 5' end, mRNA sequence.
377 ITCALTAAGAAATTGITCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAA 436
                        91 TICATTAAGAAATIGITICCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAA 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: arkerlav@tigr.org
For clone availability, additional sequence and expression
information related to this EST, please check the TIGR Human Gene
Index (http://www.tigr.org/tdb/hgi.html)
Seq primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="wArC (inhost):116104"
/db_xref="waxon:9606"
/cell_type="endothelial cell"
/dev_stage="adult"
/dev_stage="adult"
/clone_lib="Aorta endothelial cells, TNF alpha-treated"
/clone_lib="Aorta aorta; Vector: pBluescript SK-; Site_l:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56.1%; Score 261.8; DB 9; Length 334; 96.0%; Pred. No. 9.7e-58; Indels 4; ive 0; Mismatches 8; Indels 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9712 Medical Center Drive, Rockville, MD 20850 USA
Tel: 3018699056
                                                                                       437 ATATGTCTTTATAATAACAGTTAAAAGCTG 467
                                                                                                                          31 ATATGTCTTTATNATAAACAGTTAAAAGCTG 1
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Contact: Kerlavage, AR
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Matches 290; Conservative
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Gaps

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CONA Library Arrayed by: Greg Lennon, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
DNA Sequencing NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL, send email to:
info@image.llnl.gov
Seq primer: -40UP from Gibco
High quality sequence stop: 292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and by mRNA linear BST 22-JAN-2001 nac64d01.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3439129 3', mRNA sequence.
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1 (bases I to 300)

NCI/NIMDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                        120
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CAATGTTTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTG
                                                 16 CARTGITIGCNIAICCACCICCCCAAGCCCCITIACCIAIGCIGCIGCIAACGCIGCTG
                                                                                                        CTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGGACTGGTCGGTGCCCAGAAA
                                                                                                                                                                                                                       CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
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rgttaccaatctgaagtgggagcggccgcatatctttttt
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                                                                                                                                                                     53.6%;
93.5%;
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BF589966
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CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NT-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

WWW-bio.llnl.gov/bbrp/image/image.html

Insert Length: 921 Std Error: 0.00

Seq primer: -40ml3 fwd. ET from Amersham

High quality sequence stop: 379.
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/note="Organ: brain; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_l: Not I; Site_2: Eco RI; lst strand cDNA was primed with a Not I - oligo(dT) primer [5'
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NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
District and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
(Dnpublished (1998)
Contact: Robert Strausberg, Ph.D.
Bmail: cgapbs-rømail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                              279 GCCNCAATGTTTGCCTATCCACCTCCCCCAAGCCCCCCCCCGTGGGGAAGGGGAAAGT 220
                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                      309 GGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAGATATTA 368
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                                                                                                                                                                     189 GCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAGCCCCGTGGGGAAGGGGAAAGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99 AGGCCCTGTTCATTAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAGATTGTT
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    Bento
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ρχ
                                                                                Score 250.8; DB 10; Length 300;
Pred. No. 7.1e-55;
0; Mismatches 18; Indels 0;
Library is normalized, and was constructed Soares and M.Fatima Bonaldo."
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/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39 crereraharererrraharaharahakeere 1
                                                                                                                           0; Mismatches
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:1668815"
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AI031859.1 GI:3250071
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93.5%;
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Best Local Similarity
Matches 261; Conserv
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Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.

Emmert-Buck, M.D., Ph.D.

Emmert-Buck, M.D., Ph.D.

CDNA Library Preparation: M. Bento Soares, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:
info@image.llnl.gov
Seq primer: -40UP from Gibco.
T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into Library is normalized, and was constructed by Bento Soares and M.Fatima Bonaldo."
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/note="Organ: kidney; Vector: pT7T3D-Pac (Pharmacia) with
a modified polylinker; Site 1: Not 1; Site 2: Eco RI;
Plasmid DNA from the normalized library NCT CGAP Kid3 was
prepared, and ss circles were made in vitro. Following HAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BF589966 229 bp mRNA linear EST 12-DEC-2000
naa33h02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258458
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 229)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224 GGGGGATGGCTAAGAAAGCTGGGAAGAAAGGGAACAGAAAGAGGGTAGGGCTAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCTGCCTTATTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      104 AGGCCCTGTTCATTAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTT
                                                                                                                                                                                                                                                                                                                                                GCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCCCCGTGGGGAAAGGT
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                                                                                                                                                                                                                 Length 409;
                                                                                                                                                                                                                                                                               0; Mismatches 18; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                       Score 250.2; DB 9;
Pred. No. 1.1e-54;
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/db_xref="taxon:9606"
/clone="IMAGE:3258458"
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Gaps

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79 AAAGGCTCAIGCTTGGAGIGGGGACTGGTC-GGTGCCCAGAAAGTCTCTTC-TGCCACTG 136
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 ATGCTAAGAAAGCNTGGGAGATAGGGAACAGAAGAGGGTAGTGGGTGGGTGGGCTAAGAGGGG 300
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S O'Shaughnessy, A.L., Palmer, L., McCombie, W.R., Baker, J.P.,

Bahret, A., Cunnius, D., Dedhia, N.N., de la Bastide, M.,

Ratzenberger, F., King, L., Kirchoff, K.A., Miller, B., Muller, S.,

Ratzenberger, F., King, L., Kirchoff, K.A., Miller, B., Muller, S.,

Nascimento, L.U., Preston, R.R., Shah, R.S., Spiegel, L.A.,

Zutavern, T., Santos, L. and Hannon, G.J.

Expressed sequence tags from Canis familiaris (dog) (5_2002)

Unpublished (2002)

Contact: W. Richard McCombie

Lita Annenberg Hazen Genome Sequencing Center

Cold Spring Harbor Laboratory

PO Box 100, Cold Spring Harbor, NY 11724, USA

Tel: 516 367 8884

Fax: 516 367 8884

Email: mccombie@cshl.org

Plate: hd52 row: b column: 09

Seq primer: -21MlJuhyRev
  24 CCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGC----TGCTGCTGCTGCTGCTT 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
1 (bases 1 to 574)
                                                                                                                                                                                                                                                                                                                           1 CCAAGCCCCTTTACCTATGCTGCTGCTAACGNTGCNTGCTGCGTGCTGCTGCTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                   61 AAGGCTCATGCGTTGGAGTGGGGACTGGTCGGGTGCCCAGAAAGTCTCTTCGTGCCACTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCTAAGAAAGC-TGGGAGATAGGGAACAGAAGAGGGGTAGTGGGTGGGCTA-GGGGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 CTGCCTTATTTAAAGTTGGTTTGTTTATGATTCTTATACTAATTTATA 348
                                                                                                                                                                                              Length 348;
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                                                                                                                                                                                                                                              26;
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                                                                                                                                                                                              43.0%; Score 200.8; DB 9
88.5%; Pred. No. 9.7e-42;
live 0; Mismatches 26
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/mol type="mRNA"
/db_xref="taxon:9615"
/clone="hd52b09"
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Location/Qualifiers
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BQ234959.1 GI:20430835
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Canis familiaris
                                                                                                                                                                                                                                              308; Conservative
                                                                                                                                                                                                                       Similarity
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ORGANISM
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BQ234959
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purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1322376-1323911, 1456007-1456775, and 1500552-1502855). Subtraction by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA083736 348 bp mRNA linear EST 21-OCT-1996 zn39d09.rl Stratagene endothelial cell 937223 Homo sapiens cDNA clone IMAGE:549809 5', mRNA sequence.
                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          110
                                                                                                                                                                                                                                                                                                                                     229 AAAGTGGGGGATGCCTAAGAAAGCTGGGATAGGGAACAAAAAGAGGGTGGTGGTGGC 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
I (Dases I to 348)
Hillier, L. Lennon, G. Becker, M., Bonaldo, M.F., Chiapelli, B.,
Chissoe, S., Dietrich, M., DuBuque, T., Favello, A., Gißh, W.,
Fawkins, M., Hultman, M., Khoaba, T., Lacy, M., Le, M., Le, M.,
Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rifkin, L.,
Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J.,
Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R.
                                                                                                                                                                                                                                                                                               304 TAGGGGGGCCCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 TATTAAGGCCCTGTTCATTAAGAATTGTTCCCTTCCCTGTGTTCAATGTTTGTAAGA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Generation and analysis of 280,000 human expressed sequence tags Genome_Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                     169 TAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTTTTTATACTAATTTATACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGA
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/dev stage="umbilical vein, 1 passage"
/lab_host="Solk (kanamycin resistant)"
/clone_lib="Stratagene endothelial cell 937223"
                                                                                                                                                                                                                                              0;
                                                                                                                                                                                              47.3%; Score 220.8; DB 10; Length 229; 99.1%; Pred. No. 4.8e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4444 Förest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      424 TIGITCIGIGIAAATAIGICITIAIAATAAAACAGITAAAAGCTG 467
                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                              Score 220.0,
Pred. No. 4.8e-47;
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High quality sequence stop: 324.
Location/Qualifiers
                                                                                                                                                                                                                                              0; Mismatches
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/db_xref="GDB:3928326"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                              Conservative
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CF109372
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                                                                                                                                                                                                                                  122
/clone lib="Canis Total Brain cDNAs"
/note="Vector: Lambda Zap II; The library was provided by Greg Hannon and Lee Satics (Cold Spring Harbor Laboratory). This library is oligo(dT) primed using stratagene zap CDNA synthesis kit. It was made from dog whole brain cells. Please contact Greg Hannon (hannon@cshl.org) with any library related inquiries."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                 CICTICIGCCACTGACGCCCCCCATCAGGGATTGGGCCTTCTTTCCCC-CTTCCTTTCTGT 181
                                                                                                                                                                                                                                                                                                                                         269
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Sciurognathi; Muridae; Murinae;
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Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
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                                                                                                                                                                                                                                GCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAAGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coordinated Laboratory for Computational Genomics
University of Iowa
375 Newton Road , 4156 MEBRF, Iowa City, IA 52242, USA
Tel: 319 335 9250
Fax: 319 335 9565
                                                                                                                                                                Length 574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416 TGTAAAGATTGTTCTGTGTGTAAATATGTCTTTATAATAAAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 175.6; DB 13; Length
Pred. No. 4.6e-35;
0; Mismatches 79; Indels
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Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: bento-soares@uiowa.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE101709.1 GI:8493807
                                                                                                                                                            37.6%;
ilarity 72.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         270 Grerecrecercareace
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Soares, MB
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                                                                                                                                                                              Local Similarity
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BE101709/c
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Best L
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4,
clones will be available through Research Genetics (www.resgen.com) Seq primer: M13 Forward POLYA=Yes.
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Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240 GGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shultz, M.A., Zhang, L., Gu, Y.-2., Baker, G.L., Farmuchi, M.V.,
Padua, A.M., Gurske, W.A., Morin, D., Penn, S.G., Jovanovich, S.B.,
Plopper, C.G. and Buckpitt, A.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10; Length 399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417 GTAAAGATTGTTCTGTGTAAATATGTCTTTATAAAAAGGTTAAAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAAAAATTGTTCCATGTAAATATGTCTTTATAATAAAGAGTTAAAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297 graccicirigecritarcagecreeccargeccaareccaeagggaagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 148.2; DB 1
Pred. No. 6.3e-28;
                                                                                                            organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                            /mol_type="mRNA"
/strain="Sprague-Dawley"
                                                                                                                                                                                                                                                                                                                                                                                                                                      described in (Bonaldo, 6:791-806, 1996)
                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CF109372.1 GI:33164150
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31.7%;
72.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 799)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            253; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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JOURNAL

COMMENT

TITLE

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Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Exa: 402 762 4360
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt trimmed with phred
v0.980904-e. Vector identified by cross_match with the -minscore 18
POR PRIMERS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BI901469 520 bp mRNA linear BST 12-MAR-2002 id20d03.yl Melton Normalized Mixed Mouse Pancreas 1 N1-MWS1 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="pooled"
/lab_host="DHIOB"
/clone_lib="MARC 3BOV"
/note="Vector: pCMV SPORT6; Site_I: NotI; Site_2: SalI;
/ibrary made from pooled tissue from marrow, alveolar
macrophage, ovary, fetal semitendonosus muscle, and fetal
longissimus muscle."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --GCCCAGCCCT 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                230 GTGGGGAAGGGGAAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAG 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404 GIGITCAATCTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAAGATTAAAA 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chikko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and Keele, J.W.
Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209 AATTIVATACAAAGTIAATTAAAGGCCCTTTCATTAAGAAAGCCTTCCCTTTCCCTAGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170 CTTCCTTTCTGTGTCTCTGCTGCTTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103 GTGGGGAA--CGAGATGGATGGCTGGGAAAGTCTGGGGACACGAGAAGT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                290 GGTAGTGGGTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110 GTGCCCAGAAAGTCTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40;
Laegreid, W.W., Rohrer, G.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 27.8%; Score 130; DB 10; Best Local Similarity 71.2%; Pred. No. 3.6e-23; Matches 259; Conservative 0; Mismatches 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 chrechenenenenenenenenen
                                                                                                                                                                                                                                                                                                                                                                                                                                                               BACKWARD: GTTTTCCCAGTCACGACG
Plate: 35 row: P column: 11
Seg primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                           FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               464 GCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                328 GCTG 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                    JOURNAL
MEDLINE
PUBMED
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BI901469
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                         TITLE
                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
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                 Sequencing and Microarray Development

In Unpublished (2003)
Contact: Shultz MA
Dept. of Molecular Biosciences, School of Veterinary Medicine
University of California, Davis
1311 Haring Hall, One Shields Avenue, Davis, CA 95616, USA
Tel: 530 752 0793
Email: mashultzewcdavis.edu
Average Phred score is 20 or better. All poor quality data (Phred cor) and vector/linker sequence has been removed.

High quality sequence stop: 799.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev stage="adult"
/clone_lib="Rat lung airway and parenchyma cDNA libraries"
/note="Organ: lung; Vector: pGEM-112f(-); Site_1: Eco RI;
Site_2: Not I; mRNA was isolated from microdissected rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 25-APR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188 AATTTATATATAGAGATATTTAAGGCCCTCTGAGTTAAAGAAACTGTCCTCATCCCGTGTGTT 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Boridae; Bovinae; Bos.
I (bases I to 358e) W.M., Freking, B.A., Roberts, A.J., Stone, R.T.,
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCCGT 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            232 GGGGAAGGGGA--GAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAGG 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA--ATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAACGTTAAAAGCT 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248 CACTATGITTGTAAAAATTGTTCCATGTAAATATGTCTTTATAATAAAGAGTTAAAAGCT 307
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          290 GGTAGTGGGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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  Expression Analysis in Response to Lung Toxicants:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 14; Length 799;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263710 MARC 3BOV Bos taurus CDNA 5', mRNA sequence.
BF599804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30.5%; Score 142.6; DB 14; Length 73.8%; Pred. No. 2.3e-26; Live 0; Mismatches 74; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lung airways and parenchyma tissues."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'tissue_type="airway or parenchyma"
                                                                                                                                                                                                                                                                                                                                                                   organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
/clone="Contig2278"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF599804.1 GI:11696653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              222; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bos taurus (cow)
Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G 467
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                                                                                                                                                                                                                                                                                                                                               Source
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ACCESSION
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ORGANISM
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BF599804
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VERSION KEYWORDS

LOCUS

REFERENCE AUTHORS

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BX524433
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
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COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 36
BX524433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
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SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    206
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu)
MGI:1949994 This sequence now available from the IMAGE consortium,
for clone orders contact: info@image.llnl.gov
Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                               Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                            Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K., Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S., Hallier,L., Marran,M., Pape,D., Wylie,T., Martin,J., Blistain,A., Schmitt,A., Theising,B., Ritter,E., Konko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Billiams,T., Jackson,Y. and Bowers,Y.

Unpublished (2000)
Other ESTs: id20403.x1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:5663668"
/sex="Both for embryonic & newborn, male for adult and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'dev_stage="Embryonic day 10.5, E12.5, E16.5, newborn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       adult, "mixed" /lab host="DH10B" /clone lib="Melton Normalized Mixed Mouse Pancreas 1 N1-MMS1"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.8%; Score 129.8; DB 12; Length 520; 69.0%; Pred. No. 4.6e-23; Live 0; Mismatches 87; Indels 23;
musculus cDNA clone IMAGE:5663668 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
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/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 429
Location/Qualifiers
                                                                                                                                           Eukaryota; Metazoa; Chordata;
Mammalia; Butheria; Rodentia;
1 (bases 1 to 520)
                                                                                                  musculus (house mouse)
                                              BI901469.1 GI:16189020
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 617-495-1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 617-495-8557
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                                                                                                                            musculus
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Best Local Similarity
Matches 245; Conserv
                       BI901469
                                                                                             Mus
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                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                            ACCESSION
                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                      AUTHORS
                                                                        KEYWORDS
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                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
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EST 27-JUN-2003
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 520)
Heil,O., Ebert,L., Neubert,P., Peters,M., Radelof,U., Schneider,D. and Korn,B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BX524433 Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA clone IMAGp998K12950; IMAGE:407171, mRNA sequence.
180 GTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCCCCGTGGGGAAGG 239
                                                                                                                                                                   267 T------TGGCTGAGAAGAGGAGATAGA-AGCACAAGAGGGGGAGTAAAC 311
                                                                                                                                                                                                                                                                                312 GGGCCCAGTGGGCTGTCTTATATAAGTGGTTATGTGTATTTCTTATACTAATTTATATA 371
                                                                                                                                                                                                                                                                                                                                          360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAAT 412
                                                                                                                                                                                                                                                                                                                                                                                                   431
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T7, Primer seguence: TAATACGACTCACTATAGGG.
                                                      207 GCACCTCCTGCCTTATCAGCCTGCCATGGCCAGGCCACAGGGAAAGGGGAGGGGAATA
                                                                                                             240 GGAGAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGT
                                                                                                                                                                                                                                300 GGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACA
                                                                                                                                                                                                                                                                                                                                                                                                   372 GAGATATTAAGGCCCTTTGAGTTAGAGAAACTGTCCCCTTCCCATAAGTGTGTTCGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             413 GITIGIAAAGAIIGIICIGIGIAAAIAIGICITITAIAAIAACAGIIAAAAGCIG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.rzpd.de/CloneCards/cgi-
bin/showLib.pl.cgi/response?libNo=981 Contact: Ina Rolfs
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Heubnerweg 6, D-14059 Berlin, Germany
Tel: +49 30 32639 101
Fax: +49 30 32639 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RZPD Deutsches Ressourcenzentrum fuer Genomforschung
Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , IMAGE:407171"
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/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RZPD, IMAGP998K12950.
RZPDLIB, I.M.A.G.E. cDNA Clone Collection;
Mouse UnigeneSet - RZPD2 (RZPDLIB No.981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
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/clone="IMAGp998K12950
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/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mouse UnigeneSet - RZPD2
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BX524433.1 GI:32303419
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Ina Rolfs
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FBATURES source						ORIGIN	Query Match Best Local Matches 24	Qy 121	Db 146	Qy 180			Db 266	Qy 300	Db 313	Qy 360	373	Qy 413	Db 433	RESULT 38 CF582778	LOCUS DEFINITION P	ACCESSION VERSION KEYWORDS	SOURCE ORGANISM N
State Univ., from 2]; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo. "	Query Match Best Local Similarity 69.0%; Pred. No. 4.6e-23; Matches 245; Conservative 0; Mismatches 87; Indels 23; Gaps 4;	QY 121 GTCTCTTCTGCCACTGACGCCCCATCAGGGATTGGGCCTTCTTTCCCCCT-TCTTTCT 179	OY 180 GIGICICCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAGCC	Qy 240 GGAGAAAGTGGGGATGGCTAAGAAGCTGGGAGATAGGGAACAGAAGAGGGGTAGTGGGT 299	Qy 300 GGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACA 359	Qy 360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAAT 412	Qy 413 GTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467 		T 37 057	DEFINITION 142704.71 Melton Normalized Mixed Nouse Pancreas I NI-MMSI Mus DEFINITION 142704.71 Melton Normalized Mixed M	z	KEYWORDS EST. SOURCE Mus musculus (house mouse)	NISM Mus musculus Filtamota Metagoa Chordata	Buraijona; Mecazoa; Choluada, Cianada, Veresbaca, Educacoscuma, Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus. 7 (hases 1 to 51)	AUTHORS Nelton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka. I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,	Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.	Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,	Millams T. Jackson, r. and bowers, r. TITLE Factine Sonsortium		Endoctine rancies Consolitum Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge, MA 02138	Tel: 617-495-1812 Fax: 617-495-8557 Fax: 617-495-8557	Library was constructed by Dr. Douglas Melton DNA sequencing by: Washington University Genome Sequencing Center For information on obtaining a clone please contact: Juliana Brown	(brownefas.harvard.edu) MGI:1950931 This sequence now available from the IMAGE consortium, for clone orders contact: info@image.llnl.gov High quality sequence stop: 429.

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//note="Vector: pSPORT1; Site 1: Not 1; Site 2: Sal 1; Five libraries representing E10.5/12.5 pancreatic bud, E16.5 pancreas, and adult pancreas, and adult pancreas, and adult pancreas, and adult sislets of Langerhans were seperately constructed using SuperScript Plasmid Library kit (Life Technologies). CDNA was made by oligo-dT priming and size-selected by column fractionation. Libraries were amplified once on Solid support and plasmid DNA from each library was prepared and mixed in equal amounts. The mixed library DNA was normalized by method #4 from Bonalot, Lennon, and Soares normalized by method #4 from Bonalot, Lennon, and Soares 1996 Genome Research 6:791-806, 0.5 microgram single-stranded mixed library plasmid DNA was mixed with 5 micrograms PCR product representing mixed library inserts and hybridized to an Ecot of 6. Single-stranded (unhybridized) plasmids were isolated by hydroxyapatite chromatography and used to make this library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CF582778 966 bp mRNA linear EST 24-SEP-2003
AGENCOURT 11363244 updated NIH MGC_137 Mus musculus cDNA clone
IMAGE:6432441 5', mRNA sequence.
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    8 eccretriciacinecreciceraceadadeaceadecircicecererrigicerirer 207

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ecaccircifeccinarcaeccieccaneeccaeccaeaeaeaaaaeaeaeaeaaana 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    299
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58 T------TidgCrigadaadadadadadatada-adcacaadadadadaa 312
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                 /dev stage="Embryonic day 10.5, E12.5, E16.5, newborn, adult, mixed" /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 GGGCCCAGTGGGCTGTCTTATTTAAAGTGGTTATGTGTATTTCTTATACTAATTTATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCCTTCCCC-----TGTGTTCAAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.8%; Score 129.8; DB 12; Length 521;
69.0%; Pred. No. 4.6e-23;
ive 0; Mismatches 87; Indels 23; Gaps
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                                                                'organism="Mus musculus"
                                                                                                                                                          db xref="taxon:10090"
Location/Qualifiers
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                                                                                             /mol_type="mRNA"
/strain="ICR"
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245; Conservative
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1 (Dasss 1 to 645) Smith, T.P.L., Roberts, A.J., Echternkamp, S.E., Chitko-McKown, C.G., Wray, J.E. and Keele, J.W. A second set of bovine ESTs from pooled-tissue normalized libraries Unpublished (2003)

TITLE JOURNAL

COMMENT

AUTHORS

REFERENCE

Contact: Smith TPL USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, USA TEL: 402 762 4390

Email: smith@email.marc.usda.gov

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos.

ORGANISM

Single pass sequencing. Bases called with phred v0.020425.c and trimmed with the aid of the trim_alt option. Vector identified with cross match v0.990329.

Plate: FQY8034 row: I column: 3

Seq primer: GTAATACGACTCACTATAGGG

Location/Qualifiers

.645

source

FEATURES

/organism="Bos taurus" /mol_type="mRNA" /db_xref="taxon:9913"

4 179 180 GTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAGCCCCGTGGGGGAAGG 239 412 240 GGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAACAGAAGAGGGTAGTGGGT 299 325 T------TGGCTGABAAGAGGAGATAGA-AGCACAAGAGGGGAGTAAAC 369 300 GGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACA 359 370 GGCCCAGTGGCTGTCTTATTTAAAGTGGTTATGTGTATTTCTTATACTAATTTATATA 429 121 GTCTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCT-TCCTTCT 360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAAT 430 GAGATATTAAGGCCCTTTGAGTTAGAGAACTGTCCCCTTCCCATAAGTGTGTTCGCTAT 23; Gaps 413 GTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467 490 GTTTGTAAAATTGTTCCATGTAAATATGTCTTTATAATAAAGAGTTAAAAGTTG 544 27.8%; Score 129.8; DB 14; Length 966; 69.0%; Pred. No. 5.6e-23; ive 0; Mismatches 87; Indels 23; q

CB434270 645 bp mRNA linear 610870 MARC 6BOV Bos taurus cDNA 5', mRNA sequence. CB434270 GI:29214133 EST.

DEFINITION ACCESSION VERSION KEYWORDS

RESULT 39

CB434270

AK042076 2604 bp mRNA linear HTC 19-SEP-2003 Mus musculus 3 days neonate thymus cDNA, RIKEN full-length enriched library, clone:A630056D08 product:APELIN PRECURSOR (APJ ENDOGENOUS 347 102 167 208 402 403 -TGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAA 461 61 108 CGGTGCCCAGAAAGTCTCTTGTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCC 62 CTCTTCCTCTCTCTCTCCTCTCCCATCAG----------TTGCCCAGCC CCGTGGGGAAGGGGGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAG 103 CTGTGGGGAA--CGAGATGGAAAGGGATGGCTGGGAAAGTCTGGGGACACGAGAAGT---209 CTAATTTATACAAAGTTATTAAGGCCCTTTTCATTAAGAAAGCCTTCCCTTAGTT 269 GIGITCACIGIGITIGIAAAGAITGITCAGIGIAAAATAIGIC-ITAIAAAAAAAAAAGAAIGAA 2 cagrierccagaaagccrcrrcreccargearcccccccaccaggacregecerrrrccc 168 CCCTTCCTTTCTGTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAGCC 288 AGGGTAGTGGGTGGGCTAGGGGTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATA 348 CTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCC----Gaps 40; Score 129.4; DB 14; Length 645; 67; Indels Pred. No. 6.2e-23; 0; Mismatches 67 27.78; 70.88; Conservative AAGCTG 467 AAGCTG 333 Similarity 259; 228 462 328 Query Match Local Matches DEFINITION AK042076 LOCUS RESULT ORIGIN à g ò g à 셤 ₹ d ₽ g ð g ð EST 25-MAR-2003

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/tissue_type="pooled"
/lab_bost="pooled"
/lab_bost="ming"
/clone lib="MARC 6BOV"
/note="Vector: pcDNA3.1; Site_1: EcoRI; Site_2: NotI;
Library made with RNA pooled from multiple tissues
including liver, lung, hypothalamus, pituitary, and
placenta/endometrium."

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Wellcome Trust Centre for Molecular Mechanisms in Disease Wellcome Trust/MRC building Addenbrookes Hospital Cambridge) whose assistance we gratefully acknowledge.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="unnamed protein product; APELIN PRECURSOR (APJ ENDOGENOUS LIGAND) (SWISSPROT|Q9R0R4, evidence: FASTY, 100%ID, 100%length, match=231)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2266 gecricircracideraceceraceadadaceadecericrecererriarearer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180 GTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCCAGCCCCGTGGGGAAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GICICIICIGCCACIGACGCCCCCAICAGGGAIIGGGGCCIICTIICCCCCCI-ICCIIIICI
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                                                                                                        Please visit our web site for further details.
URL.http://genome.gsc.riken.go.jp/
URL.http://fantom.gsc.riken.go.jp/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cch 27.6%; Score 128.8; DB 1. Similarity 68.9%; Pred. No. 1.4e-22; 244; Conservative 0; Mismatches 87
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352...585

    .2604
    /organism="Mus musculus"

                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="C57BL/6J"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation
                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected CDNAs to prepare full-length CDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Functional annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                         Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
wehr. Enzymol. 303, 19-44 (1999)
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       full insert sequence.
                                                                                                                                                 Mus musculus (house mouse)
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AK042076.1 GI:26334910
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2d38f03.rl Soares fetal heart NDHH19W Homo sapiens CDNA clone IMAGE:342941 5', mRNA sequence.
W67823
W67823.1 GI:1376742
BST.
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                   Eukaryotania, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates; Catarrhini, Hominidae, Homo.

I (bases 1 to 528)

Bbert, L., Hell, O., Hennig, S., Neubert, P., Partsch, E., Peters, M., Radelof, U., Schneider, D. and Korn, B.

Human UnigeneSet - RZPD3

Contact: Ina ROlfs

RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH

Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This clone is available royalty-free from RZPD;
contact RZDD (cloneerzpd.de) for further information. Seq primer:
M13r, Primer sequence: TTTCACACAGGAAACAGCTATGAC.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  341 TCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCC
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RZPD; IMAGP998G06783.

Human UnigeneSet - RZPD3 (RZPDLIB No.972)

http://www.rzpd.de/CloneCards/Cgl-

blis/show.lib.pl.cgl/response7libNo-972 Contact: Ina Rolfs

RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH

Heubnerweg 6, D-14059 Berlin, Germany

Fax: +49 30 32639 101

www.rzpd.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 528;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGp998G06783 ; IMAGE:342941"
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Pred. No. 2.5e-22;
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100.0%; Pred. No. 2...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .528
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 27.2°
Best Local Similarity 100.
Matches 127; Conservative
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W67823
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Organ: mammary; Vector: pCMV-SPORT6; Site 1: Sall; Site 2: Not1; Cloned unidirectionally. Primer: Öligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Robin Humphreys, NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 780)
                                                                                                                                                         Email: cgapDs-remail.nih.gy
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAMI1370 row: j column: 21
High quality sequence stop: 411.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141 CCCCATCAGGGATTGGGGCCTTCTTTCCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCCTACCAGGACCGGGCCTTCTCCGTCTTGTCGTTTCTGCACCTCCTGCCTTATCAGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136 AGAAAGAGAGAGATAGA-AGCACAAGAGGGGAGTAAACGGGCCCAGTGGGCTGTTTAT
                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1959)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 22; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 127.2; DB 12; Length 780;
Pred. No. 2.5e-22;
0; Mismatches 83; Indels 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="IMAGE:5149940"
/clssue_type="tumor, gross tissue"
/tssue_type="tumor, months"
/lab_host="DH108"
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                                                                                                                                                                                                                                                                                                                                                                                                                  1. .780
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="C57BL/6J"
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BX118770
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360 AAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAAT
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High quality sequence stop: 484.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organiam="Mus musculus"
/mol_type="mRNA"
strain="C57BL/6"
/db_xref="taxon:10090"
/clone="IMAGE:4407171"
/sex="unknown"
                                                                                                                                                                                                  The WashU-HHMI Mouse EST Project
  musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al Similarity 68.5%;
243; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .486
                                                                                                                                                                               Waterston, R.
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Matches 243; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double-stranded cDNA was size selected, ligated to Eco RI address (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT/T3 vector (Pharmacia). Library went through one round of M. Pratima Bonaldo. This library was constructed by Ratima Bonaldo. This library was constructed from the same fetus as the fetal lung library, Soares fetal lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341 TCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCC 400
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                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09
                                                                                                                                                                                                                                                                                                                                   Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL , contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 630 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                           1 (bases 1 to 596)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                              The WashU-Merck EST Project Unpublished (1995)
Unpublished (1995)
Contact: Wisson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27.2%; Score 127; DB 14; Length 596; 100.0%; Pred. No. 2.6e-22;
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/mol_type="mRNA"
/db_xref="GDB:1268316"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 394.
Location/Qualifiers
1. 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:342941"
/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                   Seq primer: mob.REGA+ET
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sapiens (human)
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Matches 127; Conservative
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                                                                                                           Dubuque, T.,
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Mus musculus substances, Chordata, Craniata, Vertebrata, Euteleostomi, Bukaryota, Metazoa, Chordata, Sciurognathi, Muridae, Murinae, Mus. I (bases 1 to 486) Marra, M., Hiller, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T. Geisel, S., Kucaba, T., Leay, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300 GGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTTATACA 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 GIGICICCIGCICAICGGCCIGCCAIGACCIGCAGCCCAAGCCCAGCCCCGIGGGGAAGG
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                                                                                                                                                                                                                                                                Unpublished (1996)
On Sep 12, 1996 this sequence version replaced gi:1395365.
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
H44 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27.1%; Score 126.6; DB 14; Length 486; 68.5%; Pred. No. 3.1e-22; ive 0; Mismatches 89; Indels 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
/lab_host="DH10B"
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g ð

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DB 10;
                  Score 124.2; DB 1
Pred. No. 1.3e-21;
0; Mismatches 93
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Plate: 37 row: P column: 11
Seg primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FORWARD: AGGAAACAGCTATGACCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF600467.1 GI:11697624
                       26.6%;
68.7%;
               Query Match
Best Local Similarity 68.7'
Matches 252, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441 TTAAAAG 447
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SOURCE
ORGANISM
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PUBMED
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BF600467
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E. (Dases I. to 449)

S. Akimura, T., Arakawa; T., Carninci, P., Furuno, M., Hanagaki, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Imotani, K., Hayatsu, N., Hiramoto, K., Kojima, Y., Konno, H., Kouda, M., Matsuyama, T., Nakamura, M., Nishi, K., Nomura, K., Numasaki, R., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T., Suzuki, H., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Watahiki, A., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara, Y. and Hayashizaki, Y.
Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                        EST 19-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: genome_res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
carninci.p., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Itch,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare [All-length cDNA librarise for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Chara,E.,
Matankin,M., Yonoda,Y., Ishikawa,T., Ozawa,K., Tanaka,T.,
and Hayashizaki,Y.
346 GAGATATTAAGGCCCTTTGAGTTAGAGAAACTGTCCCCTTCCCATAAGTGTGTACGCTAT 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2001)
Contact: Yoshihide Hayashizaki
Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic
Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
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/clone lib="RIKEN full-length enriched, mammary gland
RCB-0526 Jyg-MC(A) cDNA"
                                                                                               GITTGIRAAAATIGITCCATGIAAATATGICTTIATAATAAAGAGITAAAAGITG 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIKEN integrated sequence analysis (RISA) system--384-format
                                                                                                                                                                                                                                                BB819942 RIKEN full-length enriched, mammary gland RCB-0526 Jyg-MC(A) cDNA Mus musculus cDNA clone GB30003B15 3', mRNA
                                                  GTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAAGCTG
                                                                                                                                                                                                                           mRNA
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'db xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
Mus musculus
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                                                                                                                                                                           RESULT 45
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LOCUS
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KEYWORDS
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Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
FO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4360
Email: smith@email.marc.usda.gov
Single pass sequencing: Bases called and alt trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
                                                                                ņ
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                                                                                                                                                                                                                                       95 GTTGGAGCTGGCCTCTTCTACTGCTGGTACCCCTACCAGGGACCGGGCCTTCTCC 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345 ATACTAATTTATACAAAGATATTAAGGCCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-- 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321 ATACTAATTTATATAGAGATATTAAGGCCCTTTGAGTTAGAGAAACTGTCCCCTTCCCAT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381 AAGTGTTCGCTATGTTTTTAAAATTCTTCCATGTAAATATGTCTTTATAATAAAAGAG 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovidae; Bovinae; Bos.
I to 342)
Smith, T. Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Enenett, G.L., Haedron, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                       16 CCCCCT-TCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225 GCCCCGTGGGGAAGGGGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285 AAGAGGGTAGTGGGTGGGCTAGGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261 AAGAGGGGAGTAAACGGGCCCAGTGGGCTGTCTTATTTTAAAGTGGTTATGTGTATTTTCTT
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                                                                                                                                                                106 GTCGGTGCCCAGAAAGTCTCTTCTGCCACTGACGCCCCCCATCAGGGATTGGGCCTTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                        -----GCCAGGCCC
                                                                                    Gaps
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Length 449;
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Single pass sequencing. Bases called and alt trimmed with phred
v0.980964.e. Vector identified by cross_match with the -minscore 18
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 AATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Analysis of bovine mammary gland EST and functional annotation of
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1 (bases 1 to 480)
Sonstegard,T., Capuco,A.V., White,J., Van Tassell,C.P.,
Connor,E.E., Cho,J., Sultana,R., Shade,L., Wray,J.E., Wells,K.D.
and Quackenbush,J.
Fax: 314 286 1810
Email: est@watson.wustl.edu
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consorium (infc@inage.llnl.gov) for further information.
Insert Length: 720 Std Brror: 0.00
Seq primer: mob.REGA+ET
High quality sequence stop: 451.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        350 AATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 410 AATGTTTGTAAAGATTGTTCTGTAAATATGTCTTTATAATAAAGGTTAAAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       constructed by Bento Soares and M.Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.3%; Score 118; DB 14; Length 616; 100.0%; Pred. No. 6e-20; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     brz31395 480 bp mRNA linear
253781 BARC 5BOV Bos taurus CDNA 5', mRNA sequence.
BF231395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Sonstegard TS
VSDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 Rm 2A, Beltsville, MD 20705, USA
Tel: 301 504 8416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the Bos taurus gene index Mamm. Genome 13 (7), 373-379 (2002) 22135956
                                                                                                                                                                                                                    organism="Homo sapiens"
                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="GDB:1323684"
/db_xref="taxon:9606"
/clone="IMAGB:415214"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BF231395.1 GI:11170359
                                                                                                                                                                                                                                                                                                                                           /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 301 504 8414
                                                                                                                                                                                              919.
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ORGANISM
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BF231395
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W91937

2h47c08.rl Soares fetal liver spleen INFLS_S1 Homo sapiens CDNA clone IMAGE:415214 5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345
                                                                                                            /clone_lib="WARC 3BOV"
/note="Vector: pCMV SPORT6; Site_l: Notl; Site_2: Sall;
/inbrary made from pooled tissue from marrow, alveolar
macrophage, ovary, fetal semitendonosus muscle, and fetal
longissimus muscle."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                             106 GTCGGTGCCCAGAAAGTCTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCCTTCTTT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         166 CCCCCTTCCTTCTGTCTCCTCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAG 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCGTGGGGAAGGGGAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGA 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCTGTGGGGAA--CGAGATGGAAAGGGATGGCTGGGAAAGTCTGGGGACACGAGAAGT- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------GGGGATGCTGAGGGGCTGTTTTAAAGTGGCTGTGTGAGATTTTA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              346 TACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC--- 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        215 AACTAATTTATACAAAGGTATTAAGGCCCTTTTCATTAAGAAAGCCTTCCCTTTCCCTAG 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---TGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTT 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275 TIGIGCICACIGIGCIGGIAAAGAITGITCACIGIAAAIAIGIC-TIAIAAIAAAGAAIG 333
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Eukaryotz.

Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

Hillier,L. Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B.,

Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,N.,

Markins,M., Hultman,M., Kucaba,T., Lacy,M., Le,M., Le,N.,

Mardis,E., Moore,B., Morris,M., Parsons,J., Prange,C., Rifkin,L.,

Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J.,

Trevaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                          8 GGCAGTGTGTGAAAGCCTCTTCTGCCATGGATGCCCCCACCAGGGACTGGGCCGTTTTC 67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     286 AGAGGGTAGTGGGTGGCCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTA
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                      40;
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
                                                                                                                                                                                                                                                                                       Length 342;
                                                                                                                                                                                                                                                                                                                                   75; Indels
                                                                                                                                                                                                                                                                               25.3%; Score 118; DB 10;
68.8%; Pred. No. 4.9e-20;
live 0; Mismatches 75;
                   /mol_type="mRNA"
/db_xref="taxon:9913"
/tissue_type="pooled"
/lab_host="DH108"
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                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                  Query Match
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KEYWORDS
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                                                                    FEATURES
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                                                                                                                                                                                                                                                                /clome_lib="BARC 5BOV"
hore="Wector: pCMV SPORT6; Site_1: Not1; Site_2: Sal1;
Library made from pooled mRNA isolated from mammary
tissues_at eight physiological, developmental, and disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                          3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BI455596 921 bp mRNA linear EST 21-AUG-2001 603174854F1 NCI_CGAP_Mam5 Mus musculus cDNA clone IMAGE:5257860 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201 GCCCGGAGTGGGGGCTGACCAGTGTCCAGAAGCCTCTTCTGCCATGGATGCCCCCACCA 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149 GGGATTGGGCCTTCTTTCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGA 208
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----TTGCCCAGCCCTGTGGGGAA--CGAGATGGAAAGGGATGGCTGGGAAAGTC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     329 GTIGITTATGATTCTTATACTAATTTATACAAAGATATTAAGGCCCCTGTTCATTAAGAAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    408 Girdrigigiricinadacharinahadaagnahnaaggcccinnicannaagaaa 467
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Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGGAGTGGGACTGGTCGCTGCCCAGAAAGTCTCTTCTGCCACTGACGCCCCCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269 GGGAGATAGGGAACAGAAGAGGGTAGTGGGTGGGCTAGGGGGGCTGCCTTATTTAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIK-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        33; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                DB 10; Length 480;
                                                                                                                                                                                                                                                                                                                                                                                                             Score 117.8; DB 10; Length
Pred. No. 6.2e-20;
0; Mismatches 62; Indels
                                                                                                                                                                  /organism≈"Bos taurus"
                                        FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTCCCAGTCACCAGG
Plate: 105 row: I column: 14
Seg primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9913"
/tissue_type="pooled"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
1 (bases 1 to 921)
                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
-minmatch 12 options.
PRimers
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Best Local Similarity
Matches 218; Conserv
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KEYWORDS
SOURCE
ORGANISM
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AUTHORS
TITLE
JOURNAL
COMMENT
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LOCUS
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SM Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Sciurognathi; Murinae; Musinalia; Eutheria; Rodentia; Sciurognathi; Murinae; Mus.
1 (Dases 1 to 21)
S Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Carninci, P., Endo, T., Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu, N., Hirozane, T., Hori, F., Ishikawa, T., Itoh, M., Izawa, M., Kadota, K., Kagawa, I., Ishikawa, T., Itoh, M., Nojima, Y., Koya, S., Kusakabe, M., Matsu, C., Kawai, Y., Saito, H., Naramura, M., Oda, H., Okazaki, Y., Owa, C., Ozawa, Y., Saito, H., Saro, M., Saro, K., Shibata, K., Shibata, Y., Shigemoto, Y., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Suzuki, H., Takahashi, F., Tateno, M., Tominaga, N., Tsunoda, Y., Watahiki, A., Watanabe, S., Wamamura, T., Yasunishi, A., Yokota, T., Yoshiki, A., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
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Library constructed by Life Technologies. Investigators
providing samples: Lothar Hennighausen/Robin Humphreys,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           223 GAG-GGGGGAATATTGGCTGAGAAAGAGAGAGATAGA-AGCACAAGAGGGGGGGTAAACG 280
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 AGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCC-----TGTGTTCAATG 413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 GCCTCTTCTACTGCTGCTACCCTACCAGGGACCGGGCCTTC
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Unpublished (1999)
Unpublished (1999)
Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suebhiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-922
                                                                                                                                                                                                                                                                                                                                                                  Transcriptional sequencing: A method for DNA sequencing using RNA polymerase. Proc. Natl. Acad. Sci. U.S.A. 95 (7), 3455-3460 (1998) Itoh,M., Kitshnai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Okazaki,Y. and Hayashizaki,Y. Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y. and Hayashizaki,Y. Futoughput plasmid preparation System. Genome Res. 9 (5), 463-470 (1999) Carninci,P. and Hayashizaki,Y. High-efficiency full-length cDNA cloning. Methods Enzymol. 303, 19-44 (1999)
Please visit our web site (http://genome.rtc.riken.go.jp) for further details.
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                                                                                                                                                                                                                                      Email: genome-res@gsc.riken.go.jp,
URL.http://genome.gsc.riken.go.jp/
URL.saski,N., Izawa,M., Watahiki,M., Ozawa,K., Tanaka,T., Yoneda,Y.,
Matsuura,S., Carninci,P., Muramatsu,M., Okazaki,Y. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /noce="Site 1: Sal1; Site_2: BamH1; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 TGTCTAAGAAAGAGAGAGATA-GAAGCACAAAGAGGGGAGTAAACGGGCCCAGTGGGCTG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone_lib="RIKEN full-length enriched, 16 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8, Gaps
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Copyright (c) 1993 - 2004 Compugen Ltd.
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27 5.8 627 10 AM678825 BH638657 SDJ1007.5 27 5.8 708 14 CD825475 BH638657 SDJ1007.5 27 5.8 708 14 CD825475 BH58.50 SDJ1007.5 27 5.8 818 29 CNS020KB BH719045 BOMEH75T 27 5.8 867 28 BH719045 BOMEH75T 27 5.8 891 29 COS03374 AD22233 MBEKB20TR 27 5.8 915 29 CNS01Q7 AL155759 Anopheles 27 5.8 948 13 BU906591 ARDMH150TR AL155759 Anopheles 27 5.8 948 13 BU906591 ARDMH162 AL15579 Anopheles 27 5.8 948 13 BU906591 ARDMH162 AL15579 Anopheles 28 5.6 207 10 BB0162396 AR28MCORT BC023336 AL284913	ALIGNMENTS	BM975075 BM975075 UI-CF-ECI-acf-1-23-0-UI.S1 UI-CF-ECI Homo sapiens CDNA clone UI-CF-ECI-acf-1-23-0-UI 3', mRNA sequence. BM975075 BM975075 EST 20-ECI-acf-1-23-0-UI 3', mRNA sequence. BM975075. GI:19592666 EST CI:19592666 EST CO-UI.S1 UI-CF-ECI Homo sapiens CDNA clone Homo sapiens (human) Homo sapiens (human) Homo sapiens (human) Normalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Genome Res (9), 728) Homaldo, M.F., Lennon, G. and Soares, M.B. Genome Res. (9), 791-806 (1996) Homaldo, M.F., Lennon, G. and Soares, W.B. Genome Res. (9), 791-806 (1996) Homidatia covery Genome Res. (9), 791-806 (1996) Homidatia covery Genome Res. (9), 791-806 (1996) Homidatia covery Homiversity of Iowa Gonetay Lab University of Iowa Contact Labrary Preparation: Dr. M. Bento Soares, University of Iowa CONA Library Arrayed by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Researchers may obtain clones from Research Clone Library Arrayed by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Researchers may obtain clones from Research Clone Distribution: Researchers may obtain clones from Sequence: 408-444, *(CAG)n#Simple_repeat 689-728, Your Genome: All Home All And And And And And And And And And And	Location/Qualifers 1.728 /organism="Homo sapiens" /mol_type="mkNA" /db_xxef="kaxxox:9606" /clone="Ul-CF-EC1=acf-1-23-0-Ul"
000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RESULT 1 BM975075/C LOCUS DETINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM AUTHORS TITLLE JOURNAL MEDLINE PUBMED COMMENT	FEALURES

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/sex="male"
/lab_host="DH10B"
/lab_host="DH10B"
/clone lib="Soares testis NHT"
/note="Wector: pT7I30-Pac (Pharmacia) with a modified
polylinker, Site 1: Not 1; Site 2: Eco RI; 1st strand cDNA
was prepared from mRNA obtained from Clontech
Laboratories, Inc., and primed with a Not I - oligo(dT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Double-stranded CDNA was ligated to Boo RI adaptors
(Pharmacia), digested with Not I and cloned into the Not I
and Boo RI sites of the medified pyTT3 vector. Library
went through one round of normalization to Cot5, and was
constructed by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                              Sequencing Center
information can be
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1 (Dases 1 to 450)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
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                                                                                                                                                                                                                                             CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I M.A.G.B. Consortium/LIML at:
                                                                                                                                                                                                                                                                                                                                            www-bio.linl.gov/bbrp/image/image.html
Insert Length: 718 Std Error: 0.00
Seq primer: -40ml3 fwd. Err from Amersham
High quality sequence stop: 417.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
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Unpublished (1997)
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Matches 447; Conservative
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/dlone=lid=lid=lid=lid=raced lid=raced                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
The sequence contained an oligo-dT track that was present in the
oligonucleotide that was used to prime the synthesis of first
strand cDNA and therefore this may represent a bonafide poly A
tail: cDNA library Preparation: M.B. Soares Lab Clone distribution:
NCI-CGAP clone distribution information can be found through the
I.M.A.G.E. Consortium/LINL at:
                                                                                                                                                                                                                                                                EST 10-SEP-1999
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                                                                                                                                                                                                                                                                                                    CGAP_Sub2 Homo sapiens cDNA clone
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1. (bases 1 to 449)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     www-bio.llnl.gov/bbrp/image/image.html The following repetitive elements were found in this cDNA sequence: 408-447,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1520904-1522439) NCI CGAP GC4 pool 1 LLAM 3164-3167, 3716-3720, 3733-3735 (IMAGE CloneIDs 1257096-1258631,
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                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                    mRNA
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UI-H-BIOD-aba-e-12-0-UI.s1 NCI_C
IMAGE:2711158 3', mRNA sequence.
                                             30 GTCTTTATAATAACAGTTAAAAGCTG 4
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/db_xref="taxon:9606"
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Seg primer: M13 Forward
POLYA=Yes.
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sapiens (human)
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Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CNA Sequencing by: Dr. M. Bento Soares, University of Iowa
CNA Sequencing by: Dr. M. Bento Soares, University of Iowa
from Dr. M. Bento Soares, Dento-soares@uiowa.edu
The following repetitive elements were found in this cDNA
sequence: 409-448, > (CAG) n#Simple_repeat
POLYA-Yes.
                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA444588 517 bp mRNA linear BST 08-NOV-2002 UI-H-DT1-awl-m-06-0-UI.81 NCI CGAP DT1 Homo sapiens cDNA clone UI-H-DT1-awl-m-06-0-UI 3', mRNA sequence.
   To Facilitate Gene Discovery.
                                                                                                                                                                                                           372
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                                                                                                                                                                                                                                                                                               CTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCGTGG 233
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                       GCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGAACTGGTCGGTGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAAGCTG
                                                                                                                                              ;
0
                                                                                                            Score 414; DB 9; Length 449;
Pred. No. 1.1e-195;
                                                                                                                                           Indels
                                                                                                                         1.le-195;
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Subtraction: Two Approaches
Genome Research 6, 791-806.
TAG_TISSUE-brain
TAG_LIB=NCI CGAP_Brn23
TAG_ESEQ=ATAȚC"
                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .517
/organism="Homo sapiens"
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                                                                                                         88.7%; Sccilarity 100.0%; Pr
Conservative 0;
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/dev stage="Addit"
/lab_host="DH10B (Life Technologies)"
/clone lib="MCI CGAP_DTI"
/note="Organ: Ling; Vector: pT773-Pac (Pharmacia) with a modified polylinker; Site=1: EcoR I; Site_2: Not I; NCI CGAP_DTI is a normalized cDNA library containing the following tissue(s): Metatastic Chondrosarcoma in Lung. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT73-Pac vector. The oligomuclectide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is AACTGTTCGG.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252 GGAAGGGGAGAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGTA 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73
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Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372 CCAGAAAGTCTTCTTCTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCTTC
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UI-H-EII-aza-n-02-0-UI.s1 NCI CGAP_EI1 Homo sapiens cDNA clone
IMAGE:5846209 3', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAG_TIŜSUE=lung metatastic chondrosarcoma
TAG_LIB=UI-H-DT1
TAG_SEQ=AACTGTTCGG"
                                    type="Metastatic Chondrosarcoma"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tch 88.7%; Score 414; DB 14; L al Similarity 100.0%; Pred. No. 1.1e-195; 414; Conservative 0; Mismatches 0;
/clone="UI-H-DT1-awl-m-06-0-UI"
/tissue_type="Metastatic Chondro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ006616.1 GI:19731516
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Bonaldo, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:
infoelinage.lln.gov
Seq primer: -40UP from Gibco
High quality sequence stop: 472.
                                                                                                                                                                                               BE855577 555 bp mRNA linear EST 29-SEP-2000 7910e01.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3306072 3' similar to contains element OFR repetitive element ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAGCCCCGTGGGGAAGGG 240
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1 (bases 1 to 52).
NCI/MINDS-CGAP, bttp://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Josecaes and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CAATGITIGCCTATCCACCICCCCAAGCCCCTTTACCTATGCTGCTAACGCTGCTGCTG
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           TTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAAGGTTAAAAGCTG 19
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/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                   BE855577.1 GI:10367753
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                 sequence.
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Matches
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//Clone Lib="NUILUB (LDITE Technologies)"
//Clone Lib="NUILUB (LDITE TECHNOLOGIES)"
//Clone Lib="NUIL GAP ELL"
//Clone Lib="NUIL GAP ELL"
//Clone Lib="Organ: Left Pelvis; Vector: pT7T3-Pac (Pharmacia)
//Clone Lib a modified polylinker; Site 1: BCOR I; Site 2: Not I;
NUIL GGAP ELL is a normalized cDNA library containing the
following tissue(a): Chondrosarcoma. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, disgested with Not I, and cloned directionally
into pT7T3-Pac vector. The oligonuclectide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT) 18 tail. The sequence tag for this library is
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                                                                                             Email: cgapbs-remail.nn.gov

Tissue Procurement: Dr. Jose Mercende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.E. Consortium/Libra at: http://image.llnl.gov
sequence: 409-448, > (CAG)n#Simple_repeat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:5846209"
/tissue_type="Chondrosarcoma"
/dev_stage="Adult"
/lab_host="DH10B (Life_Technologies)"
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100.0%; Pred. No. 1.2e-195;
ive 0; Mismatches 0;
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TAG_LIB=UI-H-EI1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                  Contact: Robert Strausberg, Ph.D.
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                                                                                                                                                                                                                                                                                                                                                                                           TGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAAGTCTCTTCTG 130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAGAGGGTAGTGGGTAGAGAGTTAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAG 370
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(Pharmacia), digested with Not I and cloned into the Not and Eco RI sites of the modified pr773 vector. Library went through one round of normalization. Library constructed by M. Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                            69
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Mammalla, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (Cases 1 to 687)
NCI-CAAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                      10 charccacchecedaadecechinacerangenecraechaedechechechechecheche
                                                                                                                                                                                                                                                                                 11 CTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAG
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NCI_CGAP_DT1 Homo sapiens cDNA clone
                                                                                                                                                                                                                               Gaps
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The following repetitive elements were found in this cDNA
Seq primer: M13 FORWARD
POLYA=Yes.
                                                                                                                                                                                                                               0;
                                                                                                                                                                          Length 431;
                                                                                                                                       Score 370; DB 9; Lengtn 42.
Pred. No. 1.1e-173;
...arches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UI-H-DT1-avw-g-05-0-UI.sl NCI CGAP DT1 HC
UI-H-DT1-avw-g-05-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
                                                                                                                                                79.2%; Scor.
99.8%; Pred. No. 1.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
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CA438256.1 GI:24802676
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Unpublished (1997)
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CA438256/c
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/clone="UI-H-DTI-aveg-05-0-UI"
/tissue_type="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/lab host="DH10B (Life Technologies)"
/clone_lib="NCI_CGAP_DTI"
/note="Urgan_tung; Vector: pT773-pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I;
NCI_CGAP_DTI is a normalized cDNA library containing the following tissue(s): Metastatic Chondrosarcoma in Lung.
The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligonucleoride used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAG TIŠSUB=lung metatastic chondrosarcoma
TAG_LIB=UI-H-DT1
TAG_SEQ=AACTGTTCGG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77.7%; Score 363; DB 14; 99.8%; Pred. No. 3.6e-170; ive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library is AACTGTTCGG.
                                 /mol_type="mRNA"
/db_xref="taxon:9606"
organism="Homo
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AI871469.1 GI:5545518
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Bonaldo, Ph.D.
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Matches 34
                                                                                                     AW594286/c
                                                                                                                                DEFINITION
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ORGANISM
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AUTHORS
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KEYWORDS
                                                                                     RESULT 11
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                                                                                                                                                                                 Bonaldo, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.AG.B. Consortium/LINL at:

www.bio.llnl.gov/bbrp/image/image.html
Insert Length: 1409 Std Exror: 0.00

Seq primer: -40UP from Gibco

High quality sequence stop: 450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                       Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. 1 (Dases 1 to 482)
NCI/NINDS-CAPA http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
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                                                                                                                                                                              M. Fatima
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                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="anaplastic oligodendroglioma"
/lab_host="DH10B"
                                                                                                                                                                       cDNA Library Preparation: M. Bento Soares, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                1. .482
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2429969"
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Best Local Simi
Matches 467;
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hg57h03.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2949749 3', mRNA sequence.
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/lab_host="DHLOB"
/lab_host="Wester: property"
/lab_host
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DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
image.llnl.gov/image/hmi/irssources.shtml
Seq primer: -40UP from Gibco.
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-romail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael
R. Emmert-Buck, M.D., Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 386)
NCI-GAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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420 AAGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG
                                                         48 AAGATTGTTCTGTGTAAAATATGTCTTTATAATAAACAGTTAAAAGCTG
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/db_xref="taxon:9606"
/clone="IMAGE:2949749"
/tissue_type="pooled germ cell tumors"
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177 369

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BF222471 428 bp mRNA linear EST 09-NOV-2000 hr75g11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134372 3' similar to contains element OFR repetitive element ', mRNA
       190 CCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCCGTGGGGAAGGGGAAAGTG 249
                                                                                                                                                                                                                                                176 GGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAA 117
                                                                                                                                                                                                                                                                                                370 GGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTC 429
                                                296 CCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCCCGTGGGGAAGGGGAAAGTG
                                                                                                   GGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGGTGGGGTGGGCTAGGGG
                                                                                                                                                 310 GGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAA
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                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BF222471.1 GI:11129648
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Unpublished (1997)
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BF222471/c
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/tissue_type="T]acenta"
/dev_stage="Full Term"
/dab_host="DH10B (Life Technologies)"
/clone_lib="NCI CGAP_Pl6"
/clone lib="NCI Liberor and Soarses, Genome Research,
/clonelibe and Comman and Soarses, Genome Research,
/clonelibe containing a Not I site. Double
/clonelibe primer containing a Not I site. Double
/clonelibe primer containing a Not I site. Double
/clonelibe primer containing a library tag sequence that is
/cotor. The oligonucleotide used to prime the synthesis of
/clonelibe primer of the synthesis of
/clonelibe primer of the containing a library tag sequence that is
/cotored between the Not I site and the (dT)18 tail. The
/cotored between this library are GA, AGGAA. For
/cotored primer information, contact: Bento Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bmail: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Steven Brown
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
from Dr. M. Bento Soares, bento-soares@uiowa.edu
                                                                                                                                                                                                                                                                       EST 27-MAR-2002
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1 (bases 1 to 356)
NCI-CRAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                    CGAP_P16 Homo sapiens cDNA clone
                         146 TGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAGGGCCCTGTTCATTAAAGA
327 TGGTTGTTTATGATTCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGA
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                                                                                            387 AATTGTTCCCTTCCCTGTGTTCAATGTTTGTAAAGATTGTT 428
                                                                                                                   86 AAITGITCCCTTCCCCTGTGTTCAATGITTGTAAAGATTGTT 45
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TAG LIB=UI-1-BB1p
TAG SEQ=AGGAA"
                                                                                                                                                                                                                                                                                         UI-1-BB1p-aus-e-04-0-UI.sl NCl CGAP P16 H0
UI-1-BB1p-aus-e-04-0-UI 3', mRNA sequence.
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100.0%; Pred. No. 1c -
. - 0; Mismatches
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/mol_type="mRNA"
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POLYA=Yes.
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Unpublished (1997)
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Best Local Similarity
Matches 338; Conserv
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KEYWORDS
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lemnon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL, send email to:
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//clone_lib="NLC GAAP Kidl1"
//clone_lib="NLC GAAP Kidl1"
/note="Organ: Kidney; Vector: pT713D-Pac (Pharmacia) with
a modified polylinker; Site 1: Not 1; Site 2: Eco RI;
plasmid DNA from the normalized library NCT GAAP Kid3 was
prepared, and ss circles were made in vitro. Following HAP
purification, this DNR was used as tracer in a subtractive
hybridization reaction. The driver was PCR-amplified cDNRs
from a pool of 5,000 clones made from the same library
(GonelDs 1322376-1323911, 1456007-1456775, and
Fatima Bonaldo. "Subtraction by Bento Soares and M.
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 428)
NCI-CAAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Query Match 69.4%; Score 324; DB 9; Length 437; Best Local Similarity 99.5%; Pred. No. 1.1e-150; Indels 0; Gaps 0; Matches 424; Conservative 0; Mismatches 2; Indels 0; Gaps 0; QY 42 GCTGCTGCTGCTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGGCTTGGAGTGGGG 101	257 CCAGCCCCGTGGGCAAGGGGAGAAAGTGGCCTAATTAAAGTGGTTGTTTTATGGAA 282 CAGAAGAGGCTGGGTGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGGAT 197 CAAAAAGGGTAGTGGGTGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGGAT 342 CTTATACTAATTTATACAAAGATATTAAAGGCCTCTTCTTTAAAGAATTGTTCCCTTCCC 137 CTTATACTAATTTATACAAAGATATTAAAGGCCTGTTCATTAAAAATTGTTCCCTTCCC 137 CTTATACTAATTTATACAAAGATATTAAAGGCCTGTTCATTAAAAAATTGTTCCCTTCCC 137 CTTATACTAATTTATACAAAGATATTAAAGGCCTGTTCATTAAAAAATTGTTCCCTTCCC 137 CTTATACTAATTTATACAAAGATATTATACGCTGTTCATTAAAAAATTGTTCCCTTCCC 11	Db 77 CHITITITITITITITITITITITITITITITITITITIT	S EST. Bomo sapiens Homo sapiens Homo sapiens Eukaryota; M Mammalia; Eu CE 1 (bases 1 RS NCI-CGAP htt. National Can Tumor Gene I Unpublished Contact: Rob Emmert-Buck, CONTACT: CGAP Tissue Procu Emmert-Buck, CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar CDNA Librar	info@image.lln.gov FEATURES Location/Qualifiers Source / a00 from Gibco. 1406 / animal.me"Homo sapiens" / mol_type="minal" / db xref="taxon:9606" / lob_host="IMAGE:3194397"
### Matches 332; Conservative 0; Mismatches 0; Indels 0; Gaps 4	QY 280	3' similar to contains element MSR1 repetitive element; NA1493364.1 GI:4394367 S EST. Home sapiens (human) ISM Home sapiens (human) Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Eutel Mammallai; Butheria; Primates; Catarrhini; Hominidae; Homo CE 1 (bases 1 to 437) NGI-GGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy Project Tumor Gene Index AL Unpublished (1997)	Contac Email Thail Thags Insert Seq pi	normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHIJ9M) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified coNAs from pools 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."

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/clone_lib="NCI_CGAP_Kid11"

/note="Organ: kidney; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Bco RI; Plasmid DNA from the normalized library NCT_CGAP Kid3 was prepared, and so circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive purification, reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (50nearDS 1322376-1323911, 1456007-1456775, and 1500552-1502855). Subtraction by Bento Soares and M. Patima Bonaldo. "
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DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.B. Consortium/LINL
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Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
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NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
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                                                                                                                                                                                                                                                                                                                                                       62.3%; Score 291; DB 10; Length 406;
.larity 99.7%; Pred. No. 3.3e-134;
Conservative 0; Mismatches 1; Indels
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Insert Length: 517 Std Error: 0.00
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T 31; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into Library is normalized, and was constructed by Bento Soares and M.Patima Bonaldo."
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
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1 (basea I to 300.)

NCI/MINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Siscaders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index

Unpublished (1998)
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3', mRNA sequence.
BF939932
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTTATACAAAG
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                                                                                                                                                                                                                                                                                                                                                                   61.0%; Score 285; DB 9; Le 100.0%; Pred. No. 3.4e-131;
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/organism="Homo sapiens"
High quality sequence stop: 312.
Location/Qualifiers
                                                                                   /db_xref="taxon:9606"
/clone="IMAGE:2432549"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300 bp
                                                                    /mol_type="mRNA"
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TITLE
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Dimke, D., Feng, D.-F., Ferrie, A., Fischer, C., Hastings, G.A., He, W.W., Hu, J.S., Greene, J.M., Gruber, J., Hudson, P., Kim, A.K., Kozak, D.L., Kunsch, C., Hungjun, J., Li, H., Meissner, P.S., Olsen, H., Raymond, L., Wei, Y.F., Ming, J., Xu, C., Yu, G.L., Ruben, S.M., Dillion, P.J., Fannon, M.R., Rosen, C.A., Haseltine, W.A., Fields, C., Frassr, C.M. and Venter, J.C.
Frassr, C.M. and Venter, J.C.
Based upon 83 million nucleocides of cDNA sequence
Nature 377 (6547 Suppl), 3-174 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI031859 409 bp mRNA linear EST 24-SEP-1998 oy45f12.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:1668815 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                  For clone availability, additional sequence and expression information related to this EST, please check the TIGR Human Gene Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: MJ3 Reverse Location/Qualifiers
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol type="mrRN"
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/db_xref="Warson:9606"
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/clone_lib="Aorta endothelial cells, TNF alpha-treated"
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BCORI; Site_2: Xhol"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               207 TCATCGGCCTGCCATGACCTGCAAGCCCCAGCCCCGTGGGGGAAGGGGAAAGTGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 TATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87 GCTGCTTAAAGCCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAAGTCTCTTCTGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 242; DB 9; Length 334;
Pred. No. 9.7e-110;
                                                                                                                                                                                                                                                                                                                                The Institute for Genomic Research
9712 Medical Center Drive, Rockville, MD 20850 USA
Tel: 3018699056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
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100.0%; Pred. No. >...
                                                                                                                                                                                                                                                                                                                                                                                                   Fax: 3018699423
Email: arkerlav@tigr.org
                                                                                                                                                                                                                                                         Other ESTs: THC174412
Contact: Kerlavage, AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI031859.1 GI:3250071
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Mammalia; Butheria; Primates; Catarrhin; Hominidae; Homo.
1 (bases 1 to 334)
8 Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A.,
Bult, C.J., Luee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D.,
White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C.,
Clayton, R.A., Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D.,
Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S.,
Glodek, A., Gnehm, C.L., Hanna, M.C., Hadblou, E., Hinkle, P.S.T.,
Kelley, J.M., Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M.,
Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M.,
Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shriey, R.,
Small, K.V., Spriggs, T.A., Utterback, T.R., Weidman, J.F., Li, Y.,
Bednarik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J.,
                                                                                                                                                                                                                                                                       334 bp mRNA linear EST 18-APR-1997
EST17255 Aorta endothelial cells, TNF alpha-treated Homo sapiens
CDNA 5' end, mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     286 AGAGGGTAGTGGGTGGGCTAGGGGGGCTGCCTTATTAAAGTGGTTGTTTATGATTCTTA 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 AGAGGGTAGTGGGTGGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTA 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  346 TACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGT 405
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the I.M.A.G.E. Consortium/LLNL, send email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
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                                                                                                                                                                                                /clone="IMAGE:3439129"
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                                                                                                                                  /organism="Homo sapiens"
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/db_xref="taxon:9606"
                 info@image.llnl.gov
Seq primer: -400P from Gibco
High quality sequence stop: 292.
Location/Qualifiers
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Matches 242; Conserv
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AA101878 458 bp mRNA linear EST 11-MAY-1997 zk85f07.s1 Soares pregnant uterus_NbHPU Homo sapiens cDNA clone IMAGE:489637 3', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287 GAGGGTAGTGGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTAT 346
                              Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 396)
Hillier,L., Lemnon,G., Becker,M., Bonaldo,M.F., Chiapelli,B., Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W., Hawkins,M., Hultman,M., Kucaba,T., Lacy,M., Le,M., Le,M., Le,M. Mardis,E., Moore,B., Morris,M., Parsos,M., Parago, Prange,C., Riffin,L., Rohlfing,T., Schallenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J., Trevaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Generation and analysis of 280,000 human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          227 CCCGTGGGGAAGGGGAGAAAGTGGGGAATGGCTAAGAAAGCTGGGAGATAGGGAAACAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65 TICAAIGITIGIAAAGAFIGIRCCGGGGAAATAAGCTTTATAATAAACAGFTAAAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              This clone is available royalty-free through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40M13 fwd. from Amersham.

Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347 ACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               407 ITCAAIGITIGIAAAGAITGITCIGIGIAAAIAIGICITITAIAAAACAGITAAAAAGCI
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                                                                                                                                                                                                                                                                                                                                                       Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
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100.0%; Pred. No. 3.1e-109;
ive 0; Mismatches 0;
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/organism="Homo sapiens"
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/db_xref="GDB:3928326"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:549809"
                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
  Homo sapiens (human)
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Best Local Similarity 100.0
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                     Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 921 Std Error: 0.00
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 379.
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                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          247 CCCCGTGGGGAAGGGGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGA 188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346 TACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGT 405
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2n39d09.81 Stratagene endothelial cell 937223 Homo sapiens cDNA
clone IMAGE:549809 3', mRNA sequence.
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1 (bases 1 to 409)
NCI/NINDS-GARP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project
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                                                                                                                                                                                                             cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
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100.0%; Pred. No. 1e-109;
cive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1668815"
                                                                              (CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
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AA083737.1 GI:1625813
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Best Local S:
Matches 242
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AA083737/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Ishii, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299 TGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATAC 358
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                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia; Butheria, Primates, Catarrhini, Hominidae, Homo.
I (bases 1 to 401)
Ota, T., Mishikawa, T., Suzuki, Y., Ishii, S., Saito, K., Kawai, Y.,
Yamamoto, J., Wakamatsu, A., Ozawa, M., Nakamura, Y., Nagai, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Research Institute; cDNA library construction: Department of Virology, Institute of Medical Science, University of Tokyo, and Helix Research Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: genomics@hri.co.jp
HRI human cDNA project; 5'- & 3'-end one pass sequencing: Helix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289 TGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCCCCCGTGGGGAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109 AAAGATATTAAAGCCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGT
                                                                                                                   AU156068 AU156068 PLACE1 Homo sapiens cDNA clone PLACE1002140 3', mRNA
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0
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HRI human cDNA project (Ota, T., Nishikawa, T., Suzuki, Y. Saito, K., Kawai, Y., Yamamoto, J., Wakamatsu, A., Ozawa, M. Nakamura, Y., Nagai, T., Sugano, S., Isogai, T.)

Unpublished (2000)

Contact: Takao Isogai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              419 AAAGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 238; DB 9; Length 403;
Pred. No. 1e-107;
0; Mismatches 1; Indels
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1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
Tel: 81-438-52-3975
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
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/clone="PlACE1002140"
/tissue_type="placenta"
/clone="placenta"
/note="Vector: pME18SFL3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
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AU156068.1 GI:11017589
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Best Local Similarity 99.7
Matches 288; Conservative
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                                                                                                                                                                      Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B.,
Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W.,
Hawkins,M., Hulman,M., Kucaba,T., Lacy,M. Le,M., Le,N., Le,N.
Mardis,E., Moore,B., Morris,M., Parsons,J., Prange,C., Rifkin,L.,
Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J.,
Trevaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R.
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                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 458)
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/note="Organ: uterus; Vector: pT7T3-Pac; Site 1: Not I;
Site 2: Eco RI; 1st strand cDNA was primed with a Not I
                                                                                                                                                                                                                                                                                                                                      Generation and analysis of 280,000 human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
7el: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LINL; contact the
INAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 528 54d Error: 0.00
Seq primer: -40M13 fwd. from Amersham.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB:3804224"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/clone="IMAGE:489637"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="adult"
/lab_host="DH10B"
                         GI:1645281
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                                                                 Homo sapiens (human)
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271 GGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCCGTGGGGAAAGGGGGGAAAGTGGGGATG
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                                                                                                                                                                                                                                                                                 The Institute for Genomic Research
712 Medical Center Drive, Rockville, MD 20850 USA
713: 3018699423
Fax: 3018699423
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Best Local Similarity 99.6%; Pred. No. 2.9e-89;
Matches 251; Conservative 0; Mismatches 1;
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Contact: Kerlavage, AR
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AL570794 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA
                                                                                                                                                                                                                                                                                                   Contact: Genoscope
Genoscope - Centre National de Sequencage
Bp 191 91006 EWRY cedex - France
Bmail: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 977)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On Feb 16, 2001 this sequence version replaced gi:12927452.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Howo sapiens PLACENTA COT 25-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR v
sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://www.genoscope.cns.fr/
gib.bin/cluster.cgi?seq=CSODI022AHI2NPl&cluster=10757.r. Contact
gib.bin/cluster.cgi?seq=CSODI022AHI2NPl&cluster=10757.r. Contact
Feng Liang Bmail : fliang@ilfetech.com URL :
http://fulllength.invitrogen.com/ Invitrogen Corporation 1600
http://fulllength.invitrogen.com/ Invitrogen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODI022AHI2NP1.
Location/Qualifiers
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EST78761 Placenta I Homo sapiens CDNA, mRNA sequence.
AA367347
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                      clone CS0DI022YC23 3-PRIME, mRNA sequence.
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Pred. No. 3.5e-91;
0; Mismatches 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
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/db_xref="taxon:9606"
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Matches 255; Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases I to 271) Adams, M. D., Soares, M. B., Kerlavage, A.R., Fields, C. and Venter, J.C. Rapid cDNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library Nat. Genet. 4, 373-380 (1993)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: arkerlav@tigr.org
byc clone availablity, additional sequence and expression
information related to this EST, please check the TIGR Human Gene
Index (http://www.tigr.org/tdb/hgi/hgi.html)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151 TTATTTAAAGTGGTTGTTTATGANTCTTATACTAATTTATACAAAGATATTAAGGCCCTG 92
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/mol type="marka" |
/db_xref="ATCC (inhost):172380"
/db_xref="taxon:9606"
/dev_stage="fetus"
/dev_stage="fetus"
/clone_lb="placenta"
/note="Organ: placenta; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: EcoRI"
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 414)
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Homo sapiens
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AL571908/c
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                                                                                                                                                                                                                                                                                                                                                                                                  /note="Vector: lafmid BA, Site_1: HindIII, Site_2: NotI; Normalized infant brain cDNA library made by Dr. M. Soares (Columbia University), oligo-dT primed and directionally cloned between HindIII (5') and NotI (3') sites "
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       290 CTGTGTCNCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCAGCCCGTGGGGAA 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238 GGGGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGG 297
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298 GTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTATACTAATTTATA 357
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             358 CAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTGTTCAATGTTTG 417
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350 AAAGICICTICIGCCACIGACGCCCCCAICAGGGAIIGGGCCIICITICCCCCTICITI
                                                                                                                                                                                                                                                                                                                                                          LLNL array of Dr. M. Soares
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Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.
Parsens,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Wilson,R., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  418 TAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAAAAGCTG 467
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42.2%; Score 197; DB 14; Length 414; ilarity 99.1%; Pred. No. 3.1e-87; Conservative 0; Mismatches 3; Indels (
             Human cDNAs from infant brain
Unpublished (1993)
Contact: Sikela JM
Department of Pharmacology
University of Colorado Health Sciences Center
Box C236, 4200 E. 9th Ave, Denver CO 80262-0236
Tel: 303270637
Fax: 3032707097
Email: nikki@tally.uchsc.edu
Seq primer: -21M13 Universal.
                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
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/clone_lib="Infant brain, IJI
                                                                                                                                                                                                                                Location/Qualifiers
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es 347; Conserv
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1 (bases 1 to 1200)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                             High quality sequence stops: 355 Source: IXAGE Consortium, LINL This clone is available royalty-free through LINL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      287 GAGGGIAGIGGGTGGGCIAGGGGGGCTGCCITATITAAAGTGGITGTTTAIGATTTAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       192 GAGGGIAGTGGGGTGGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGANTCTTAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .,
The WashU-Merck EST Project
Unpublished (1995)
Contact: Wilson RV
Washington University School of Medicine
Washington Daiversity School of Medicine
1444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRKh"
/db_xref="GDB:41555"
/db_xref="taxon:9606"
/clone="IMAGE:43014"
                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 363
Location/Qualifiers
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seq29-na-truncated.olig10.rst

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Homo sapiens (human)
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Unpublished (1997)
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AL570843 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA
clone CS0DI012XII0 3-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue type="PLACENTA COT 25-NORMALIZED"
/clone lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer: Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and ECOR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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BP 191 91006 EVRY cedex - France
Bmail: sequelégenoscope.ons.fr, web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 CCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTGTTCAATGTTTGTAAAGATTGTTCTG 431
                                                                                                                                                                                http://www.genoscope.cns.fr/
cgi.bin/cluster.cgi?seq=CS0DI029CF01NP1&cluster=10757.r. Contact
cgi.bin/cluster.cgi?seq=CS0DI029CF01NP1&cluster=10757.r. Contact
berg Liang Bmail : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CS0DI029CF01NP1.
Location/Qualifiers
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Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

(bases 1 to 1201)
Mannalia, Caruber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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BP 191 91006 EVRY cedex - France
Email: seqrefégenoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 10757.r For
more information about this cluster, see
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cgi-bin/cluster.cgi?seq=cSoDi012BB05NP1&cluster=10757.r. Contact
Feng Liang Email : filangolifetech.com VRL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODI012BB05NP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
Feb 16, 2001 this sequence version replaced gi:12929669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 On Feb 16, 2001 this sequence version replaced gi:12927548 Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33.4%; Score 156; DB 9; Length 1200; 100.0%; Pred. No. 1.1e-66; ive 0; Mismatches 0; Indels (
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                                                                                                                                                                                                                                                                                                                                                 organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                       clone="CS0DI029YL01"
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Contact: Genoscope
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BF589966 229 bp mRNA linear EST 12-DEC-2000 naa33h02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258458
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Email: Gapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
clone distribution: NCI-CGAP clone distribution information can be
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/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo (dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR v
sites of the pCMVSPORT 6 vector. Library was normalized."
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NCI-(GAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 CCAGAAAGICITCTTGCCACTGACGCCCCCATCAGGGATTGGGCCTTCTTTCCCCCTTC
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info@image.llnl.gov
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                                                                                                                                                                                                                                                                                                                                                                                                                                         33.2%; Score 155; DB 9; Length 1201; 99.2%; Pred. No. 3.4e-66; cive 0; Mismatches 2; Indels (
                                                              'organism="Homo sapiens"
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/clone="IMAGE:3258458"
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/db_xref="taxon:9606"
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461 AAAGCTG 467
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               285 AAGAGGGTAGGGGTAGGGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTT 344
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neubert, P., Partsch, E., Peters, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128 ATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTG
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Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                28.3%; Score 132; DB 10; Length 229; 99.5%; Pred. No. 8.7e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
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Ebert, L., Heil, O., Hennig, S., Neuberr Radelof, U., Schneider, D. and Korn, B. Human UnigeneSet - RZPD3
Contact: Ina Rolfs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
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/mol_type="mRNA"
/db_xref="taxon:9606"
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BX118770.1 GI:27882396
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Matches 182; Conservative
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AUTHORS
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JOURNAL
COMMENT
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W67823
zd38f03.rl Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone
IMAGE:342941 5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341 TCTTATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCC 400
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This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 630 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Butheria, Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 596)
Hillier,L., Clark,N., Bubaque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultham,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,B., Waterston,R., Williamson,A., Wohldmann,P. and
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 27.2%; Score 127; DB 13; Length 528; Best Local Similarity 100.0%; Pred. No. 3e-52; Matches 127; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
clone="IMAGp998G06783 ; IMAGE:342941"
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/organism="Homo sapiens"
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Seq primer: m60.REGA+ET
High quality sequence stop: 394
Location/Qualifiers
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/db_xref="GDB:1268316"
/db_xref="taxon:9606"
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Unpublished (1995)
Contact: Wilson RK
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W67823.1 GI:1376742
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hr72a04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3133998 3', mRNA sequence.
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Tissue Producement: Christopher Moskaluk, M.D., Ph.D., Michael R.,
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTC 60
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 544)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          350 AATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTC
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Seg primer: -40UP from Gibco
High quality sequence stop: 468.
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/organism="Homo sapiens"
/mol_type="mRNA"
/db xref="GDE:1323684"
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:3133998"
                                                                                                 /db_xref="taxon:9606"
/clone="IMAGE:415214"
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                                                                                                                                                                         /sex="male"
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Best Local Similarity 100.
Matches 118; Conservative
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BF114974/c
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TITLE
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                                                                                                                                     0;
                                                                                                                                                                                                                                                                           double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT773 vector (Pharmacia). Library went through one round of normalization for a factor of the Not I was a size of a modified pT773 vector of the Not I was a size of a modified pT773 vector of the Not I was a size of a modified pT773 vector of the Not I was a size of a modified pT773 vector of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I was a size of the Not I w
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Hillier, L., Lemnon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Haukins, M., Rucaba, T., Lacy, M., Le, M., Scholish, E., Morris, M., Parson, J., Prange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                     normalization to a Cot = 5. Library constructed by M.Fatima Bonaldo. This library was constructed from the same fetus as the fetal lung library, Soares fetal lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Generation and analysis of 280,000 human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
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clone IMAGE:415214 5', mRNA sequence.
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This clone is available royalty-free through LINL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 720 Std Error: 0.00
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27.2%; Score 127; DB 14; Length 596;
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                                                                        dev stage="19 weeks"
lab_host="DH10B (ampicillin resistant)"
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High quality sequence stop: 451.
Location/Qualifiers
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       clone="IMAGE:342941"
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Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461 AAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 AAAGCTG 127
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DEFINITION

ACCESSION

VERSION KEYWORDS

RESULT 32

qq à W91937

ORGANISM

REFERENCE AUTHORS source

FEATURES

MEDLINE PUBMED COMMENT

TITLE JOURNAL

0 409

Query Match Best Local

Matches

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a modified polylinker; Site 1: Not I; Site 2: Eco RI; basand DNA from the normalized library NoT CGAP Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive purification reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1322376-1323911, 1456007-1456775, and Farima Bonald. "Butto Bonald."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue type="Peripheral Nervous system"
/lab_host="DH108 (T1 phage-resistant)"
/clone lib="Human Anterior Horn"
/note="Vector: pGNV-SPORT6.1; Site_1: EcoRV (destroyed);
Site_2: Not1; Library is oligo-dT primed and directionally
cloned (EcoRV site is destroyed upon cloning). Average
insert size 2.1 kb. Library was constructed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CF456943 885 bp mRNA linear EST 04-SEP-2003
AGENCOURT_15337517 Human Anterior Horn Homo sapiens cDNA clone
IMAGE:305I4432 5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                            446
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 885)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: Invitrogen Corp.
CDNA Library Preparation: Invitrogen Corp.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
fround through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
Column: 17
High quality sequence start: 4
High quality sequence start: 4
High quality sequence brop: 598.
Location/Qualifiers
1. .885
                                                                                                                                                                                                                                                                                                                                                                                                                       387 AATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTT
                                                                                                                                                                                                                                                                                                                                                                     Gaps
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                     .,
                                                                                                                                                                                                                                                                                                        17.3%; Score 81; DB 10; Length 544; 100.0%; Pred. No. 3e-29; ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Daniels S. Gerhard, Ph.D. Office of Cancer Genomics National Cancer Institute / NIH National Cancer Institute / NIH Build: 31 Rml0A07 Bethesda, MD 20892 Bmail: cgapbs-r@mail.nih.gov Tissue Procurement: Dr. James R. Lupski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:30514432"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447 ATAATAAACAGTTAAAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         484 ATAATAAACAGTTAAAAGCTG 464
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DEFINITION
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TITLE
JOURNAL
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KEYWORDS
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Length 885;

DB 14; 1e-28;

Score 80; Pred. No.

17.1%; S 100.0%;

Query Match Best Local Similarity

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2n39d09.rl Stratagene endothelial cell 937223 Homo sapiens CDNA
clone IMAGE:549809 5', mRNA sequence.
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                                                                                    624 CAATGITTGCCTATCCACCTCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B., Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W., Hakwins,M., Hullman,M., Kucaba,T., Lacy,M., Le,M., E., Lennon,B., Morris,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J., Levaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Umbilical vein endothelial cells, passaged once. Average insert size: 1.0 kb; Uni-ZAP XR Vector; ~5; adaptor sequence: 5; GAATTCGGCACGAG 3' ~3; adaptor sequence: 5; CTCGAGTTTTTTTTTTTTTTTTTT 3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Generation and analysis of 280,000 human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="umbilical vein, 1 passage"
/lab_host="SOLR (kanamycin resistant)"
/clone_lib="Stratagene endothelial cell 937223"
/note="Vector: pBluescript SK.; Site 1: EcoRI; Site_2:
XhoI; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -28M13 rev2 from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147 TTCTTTCCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCCAGAAA
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   160 TTCTTTCCCCCTTCCTTTCTGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                          1 CAATGITIGCCIAICCACCICCCCCAAGCCCCITIACCIAIGCIGCIGCI
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Indels
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0; Mismatches
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/mol_type="mRRA"
/db_xref="gD3:392832"
/db_xref="taxon:9606"
/clone="IMAGE:549809"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 324
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
                                                                                                                                                                684 CTGCTGCTGCTGCTTAA 703
                                                                                                                               61 CIGCIGCIGCIGCITAA 80
                                                                                                                                                                                                                                                                                                                                                                            AA083736.1 GI:1625812
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                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
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80; Conservative
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AA083736
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SOURCE ORGANISM

ACCESSION VERSION KEYWORDS AUTHORS TITLE

JOURNAL

COMMENT

REFERENCE

RESULT 36 AI871137/c DEFINITION

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/clone="Indage:586800"
/tissue_type="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/dev_stage="Metastatic Chondrosarcoma"
/lab_host="DH10B (Life Technologies)"
/lote="Organ: Lung; Vector: pT713-pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I;
NCI_CGAP DT0 is a cDNA library containing the following tissue (s): Metastatic Chondrosarcoma in Lung; The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oilgo-dry primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I; and cloned directionally into pT713-pac vector. The oilgonuclectide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the
                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
Email: capabbs-remail.nih.gov
Trissue Procurement: Dr. Jose Mercuende
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
POLYA=Yes.
                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 556)
NCI-(CARP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  410 AATGTTTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAAAACAGTTAAAAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537 AATGITIGIAAAGAITGITCIGIGIAAATAIGICITITATAATAACAGITAAAAGCIG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UI-H-DT0-att-k-01-0-UI.s1 NCI_CGAP_DT0 Homo sapiens CDNA clone BM992527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (dT)18 tail. The sequence tag for this library is AACTGTTCGG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAG_TISSUE=lung metatastic chondrosarcoma
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9.3e-18;
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12.4%; Score 58; DB
Best Local Similarity 100.0%; Pred. No. 9.3
Matches 58; Conservative 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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TAG_SEQ=AACTGTTCGG"
                                    BM994192.1 GI:19719093
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                                                                                            Homo sapiens (human)
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Homo sapiens
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Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .556
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BM992527/c
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SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:

Insert Length: 669 Std Error: 0.00
Seq primer: -40UP from Gibco
High quality sequence stop: 455.

1.:557
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 557 IGIICATIAAGAAAITGIICCCTICCCCIGIGIICAAIGIITGIAAAGAITGIICIGIGI 498
                                                                                                                                                                                                                                                                                                                                                Bukaryota; Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 557)

NCI/NTNDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological bisorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index

Unpublished (1998)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA Library Arrayed by: Greg Lennon, Ph.D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:2431144"
                                                                                                                                                                                                                                        AI871137.1 GI:5545105
207 GCCCAGCCCGTGGG 221
                                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                           mRNA sequence.
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FEATURES

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EST 17-JUN-2002

497

LOCUS DEFINITION

BM994192/c

RESULT 37

Query Match

ORIGIN

Best Loc Matches

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Tissue Procurement: Dr. Jose Mercuende

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source
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="Meastatic Chondrosarcoma"
/dev stage="Adult"
/lab_host="Adult"
/lab_host="DH10B (Life Technologies)"
/clone_lib="NOI_CGAP_DT0"
/note="Organ: Lung, Vector: pT7T9-Pec (Pharmacia) with a modified polylinker; Site_1: BCOR I; Site_2: Not I;
NCI_CGAP_DT0 is a cDNA library containing the following viscue(s): Metatastic Chondrosarcoma in Lung. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand oDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an ECOR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligomacleotide used to prime the synthesis of first strand cDNA contains a library tag sequence that is located between the Not I site and the (dT) B tail. The sequence tag for this library is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ006379 1744 bp mRNA linear EST 26-MAR-2002 UI-H-EII-aza-i-11-0-UI.s1 NCI_CGAP_EII Homo sapiens cDNA clone IMAGS:5846098 3', mRNA sequence.
                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M. M.G.B. Consortium/LMM at: http://image.llnl.gov
The following repetitive elements were found in this cDNA
sequence: 1-21, >AT zich#Low_complexity (matched compliment)
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (basea 1 to 744)
NCI-CAAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP);
NCI-CGAP http://www.ncbi.nlm.nih.gov/nciogap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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TAG_LIB=UI-H-DT0
TAG_SEQ-AACTGTTCGG"
                                                         Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
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Impublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:5864184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
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BQ006379.1 GI:19731279
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BQ006379/c
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AUTHORS
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/clone lib="NCI CAPP EII"
//note="Organ: Left Pelvis; Vector: pT7T3-Pac (Pharmacia)
with a modified polylinker; Site 1: ECOR I; Site 2: Not I;
NCI CGAP EII is a normalized cDNĀ library containing the
following tissue(s): Chondrosarcoma. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pT7T3-Pac vector: The oligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT)la tail. The sequence tag for this library is
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CDNA Library preparation: Dr. M. Bento Soares, University of Iowa CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone Distribution information medicing can be found through the I.M.A.G.E. Consortium/Libra at: http://image.llnl.gov The following repetitive elements were found in this cDNA sequence: 1-21, AT rich#Low_complexity (matched compliment) POLYA=Yes.
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
1 (bases 1 to 574)
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S O'Shaughnessy, A.L., Palmer, L., McCombie, W.R., Baker, J.P.,
Bahret, A., Cunnius, D., Dedhia, N.N., de la Bastide, M.,
Katzenberger, F., King, L., Kirchoff, K.A., Miller, B., Muller, S.,
Katzenberger, F., Sing, L., Kirchoff, K.S., Spiegel, L.A.,
Zutavern, T., Santos, L. and Hannon, G.J.
Expressed sequence tags from Canis familiaris (dog) (5_2002)
Unpublished (2002)
Contact: W. Richard McCombie
Lita Annenberg Hazen Genome Sequencing Center
Cold Spring Harbor Laboratory
PO Box 100, Cold Spring Harbor, NY 11724, USA
Tel: 516 367 8884
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5846098"
/tissue="TMAGE:6hondrosarcoma"
/dev_stage="Adult"
/lab_host="BH10B_(Life_Technologies)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAG_IISSUE=chondrosarcoma
TAG_LIB=UI-H-EI1
                                                                                                                                                                                                                                                                                                                                                                                       1. .744
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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Canis familiaris (dog)
Canis familiaris
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once through E. coli XL1-Blue MRF'."
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GSS; genome survey sequence.
Tetraodon nigroviridis
Tetraodon nigroviridis
                                                            7.33,
100.0%; Pre
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                                                                                                         34; Conservative
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Direct Submission
                                                                                  Best Local Similarity
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PUBMED
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/note="Vector: Lambda ZAPII; Site_1: BcoRI; Site_2: XhoI;
Second generation merozoites of E. tenella H were purified
by column chromatography and mRNA extracted using a
FASTRACK kit (Invitrogen). CDNA was synthesised and a
Uni ZAP XR library was constructed using cDNA synthesis
kit, ZAP-cDNA synthesis kit and ZAP-cDNA digapack III
Gold cloning kit (Stratagene). The library was amplified
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                                                                                                                                                                                                     /clone_lib="Camis Total Brain cDNAs"
/clone_lib="Cambda Zap II; The library was provided by note="Vector: Lambda Zap II; The library was provided by Garg Hannon and Lee Santos (Cold Spring Harbor Laboratory). This library is oligo(dT) primed using stratagene zap CDNA synthesis kit. It was made from dog whole brain cells. Please contact Greg Hannon (hannon@cshl.org) with any library related inquiries."
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Wan, K.L., Chong, S.P., Ng, S.T., Tomley, F.M. and Jangi, M.S.
Survey of genes in Elmeria tenella merozoite
Unpublished (1999)
Contact: Wan KL
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Clone="etmi085"
dev stage="second generation merozoite"
/lab_host="XL1-Blue MRF'"
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Universiti Kebangsaan Malaysia
43600 UXM Bangi, Selangor DE, Malaysia
8292997
Fax: 6 03 8293949
Email: Klwan@pkrisc.cc.ukm.my
                                                                                                             1. .574 | Canis familiaris" | /organism="Canis familiaris" | /mol Lype="mrnA" | /mol Zyze="taxon:9615" | /clone="hd52b09" |
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              Email: mccombie@cshl.org
Plate: hdf2 row: b column: 09
Seq primer: -21Ml3UnivRev
High quality sequence stop: 574.
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/strain="Houghton"
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A1676745.1 GI:4877225
EST.
Fax: 516 367 8874
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Eimeria tenella
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BACKWARD: T7
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AUTHORS
TITLE
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CNSO5DCI 972 bp DNA linear GSS 01-SEP-2000 Tetraodon nigroviridis genome survey sequence T3 end of clone 042N02 of library A from Tetraodon nigroviridis, genomic survey
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BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
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Actinopterygii, Neopterygii, Teleostei, Buteleostei, Neoteleostei,
Acanthomorpha, Acanthopterygii, Percomorpha, Tetraodontiformes,
Tetradontoidea, Tetraodontidae, Tetraodon.
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Estimate of human gene number provided by genome-wide analysis
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/organism="Tetraodon nigroviridis"

/mol_type="genomic DNA"

/db_xref="taxon:99883"

/clone="04x02"

/clone lib="A"

/note="Genoscope sequence ID : COAAO42DG01A1~end : T3"
                                                                       Gaps
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   Length 491;
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Nat. Genet. 25 (2), 235-238 (2000)
                                                                                                                                                                      486 TGCTGCTAACGCTGCTGCTGCTGCTGCTGCTGCT 453
Score 34; DB 9;
Pred. No. 9e-06;
0; Mismatches (
                                                                                                                             44 IGCTGCTAACGCTGCTGCTGCTGCTGCTGCT 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: (33)149813530
Fax: (33)1498080908
Email: guellaen@infobiogen.fr
This sequence derives from a clone which was selected from the cDNA
library - Testis 5 - using a repeat of 14 CAG as probe
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 405)
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Leishmania braziliensis GSS, clone LBAF096B01, genomic survey
f06500r Testis 5 Homo sapiens cDNA clone f06500 3' end, mRNA
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Leishmania, Leishmania braziliensis species complex.
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100.0%; Pred. No. 0.0028;
iive 0; Mismatches 0;
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/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                         Guellaen, G. Unpublished (1996)
Unpublished (1996)
Contact: Guellaen G
Unite INSERM 99
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Leishmania braziliensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seg primer: M13 reverse.
Location/Qualifiers
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                                                                                            GI:1929211
                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 423)
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Best Local Similarity 100.
Matches 29; Conservative
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                                                                                                                                                                                           Homo sapiens
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BX541495.1
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AA065331.1
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LBAF096B01
DEFINITION
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TITLE
                                                              ACCESSION
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1. (bases 1 to 311)

2. Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A.,

Bult, C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D.,

Mhitc, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C.,

Clayton, R.A., Cline, T.R., Cotton, M.D., Barle-Hughes, J., Fine, L.D.,

Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S.,

Glodek, A., Ghelm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P.S.T.,

Kelley, J.M., Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M.,

Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M.,

Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shirley, R.,

Bednarik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J.,

He, W.M., Hu, J.S., Greene, J.M., Gruber, J., Hatings, G.A.,

Kozak, D.L., Kunsch, C., Hungjun, J., Li, H., Meisner, P.S., Olsen, H.,

Raymond, L., Wel, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M.,

Praser, C.M. and Venfer, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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                                                                                            EST 21-APR-1997
                                                                                  AA363384 SET 21-APR-1997 BET 21-APR-1997 EST73237 Ovary I Homo sapiens cDNA 5' end similar to similar to H. sapiens hypothetical protein CTG-B33 (GB:L10376), mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of CDNA sequence Nature 377 (6547 Suppl), 3-174 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The Institute for Genomic Research 9712 Medical Center Drive, Rockville, MD 20850 USA Tel. 3018699056 Fex. 3018699423 Enail: arkerlav@tigr.org for clone availability, additional sequence and expression information related to this EST, please check the TIGR Human Gene Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="adult, 71 yrs"
/clone_lib="Owary 1"
/note="Organ: ovary, Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: Xho!"
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/mol_type="mRNA"
/db_rrref="ATCC (inhost):167640"
/db_rrref="taxon:9606"
/sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
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Dest Local Similarity 100.0%; Fred. No. 0.0

Amerian 0, Mismatches
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Contact: Kerlavage, AR
                                                                                                                                                                                                                                                                                 Homo sapiens (human)
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/d.zee=TWAGE:4577111"
/tissue type="adenocarcinoma cell line"
/lab.hot=="BH10B (phage-resistant)"
/clone lib="NH MC 15"
/clone lib="NH MC 15"
/note="Organ: colon, Vector: pOTB7; Site 1: Xho1; Site 2: BcoR1; cDNA made by oligo-dr priming. Directionally cloned into Ecot3/Xho1 sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis Xit (Stratagene) and Superscript II RT (Life Technologies)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG528108 855 bp mRNA linear EST 03-APR-2001 602557488F1 NIH_MGC_59 Homo sapiens cDNA clone IMAGE:4686572 5', mRNA sequence.
BG528108
BG528108.1 GI:13519645
EST.
                                                                                                                                                                                                                                                BG328052 77-FEB-2001
602427694F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:4547111 5',
                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I M.A.G.E. Consortium (LLNL)
DNA Sequencing by: NIH Intramural Sequencing Center
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
Flate: LLCM1234 row: 1 column: 24
High quality sequence stop: 630.
Location/Qualifiers
                 6.2%; Score 29; DB 14; Length 482;
100.0%; Pred. No. 0.0028;
Ive 0; Mismatches 0; Indels
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100.0%; Pred. No. 0.003;
tive 0; Mismatches 0; Indels
                                         1 Similarity 100.0%; Fred. No. 0.0 29; Conservative 0; Mismatches
                                                                                                                                 .82 GCTGCTGCTGCTGCTGCTGCTTAAAG 210
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bmail: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                    BG328052.1 GI:13134490
                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                 yb60h09.rl Stratagene ovary (#937217) Homo sapiens cDNA clone
IMAGE:75617 5', mRNA sequence.
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Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.

Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.

Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B.,

Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W.,

Mawkins,M., Hultman,M., Kucaba,T., Lacy,M., Le,M., Le,N.,

Mardis,E., Moore,B., Worris,M., Parsons,J., Prange,C., Rifkin,L.,

Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J.,

Fravaskis,B., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Generation and analysis of 280,000 human expressed sequence tags
Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                            Gaps
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                     Length 423;
                                                                                                                                                                                                                            0; Indels
                            DB 29;
                                                                                                                                                                      6.2%; Scor.
100.0%; Pred. No. v...
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                                                                                                                                                                                                                                                                                                          180 craacecrecrecrecrecrecrecrecr 208
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cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T58423.1 GI:660260
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                                                                                                                                                                                                                            29; Conservative
                       .423
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Best Local Similarity
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8889549
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SOURCE
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                       source
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FEATURES
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chloronemata, caulonemata and rhizoid-like protonemata"
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ga66a05.v1 Moss EST library PPU Physoconitrella patens cDNA clone PEP SOURCE ID:PPUI.10509 5' similar to TR:Q9ZVB7 Q9ZVB7 PUTATIVE STRICTOSIDINE SYNTHASE. ; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue type="mixture of chloronemata, caulonemata and rhizoid-like protonemata" /clone_lib="normalized full length cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Physcomitteria patens
Physcomitteria patens
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Bryophyta;
Bryopsida; Funaridae; Funariales; Funariaceae; Physcomitrella.
1 (bases 1 to 345)
Quatrano, R., Bashiardes, S., Cove, D., Cuming, A., Knight, C.,
Clifton, S., Marra, M., Hillier, L., Page, D., Marrin, J., Wylie, T.,
Underwood, K., Theising, B., Allen, M., Bowers, Y., Person, B.,
Swaller, T., Steptoe, M., Gibbons, M., Harvey, N., Ritter, E.,
Jackson, Y., McCann, R., Waterston, R. and Wilson, R.
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Physcomitrella patens subsp. patens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.0%; Score 28; DB 12; Length 323;
100.0%; Pred. No. 0.0085;
iive 0; Mismatches 0; Indels
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Leeds/Wash U Moss EST Project
Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278 Accerecrecrecrecrecrecrecre 251
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="pphn28014"
                                            Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AW509816.1 GI:7147894
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AW509816
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                                         COMMENT
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/lissue_tropolitories.
/lab_host="minos" | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | Interest | 
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Wishiyama, T., Fujita, T., Shin-i, T., Seki, M., Nishide, H.,
Uchiyama, T., Kamiya, A., Carninci, P., Hayashizaki, Y., Shinozaki, K.,
Kohara, Y. and Hasebe, M.
Comparative genomics of Physcomitrella patens gametophytic
transcriptome and Arabidopsis thaliana: implication for land plant
                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Physocmitrella patens subsp. patens
Physocmitrella patens subsp. patens
Eukaryota: Viridiplantae; Streptophyta; Embryophyta; Bryophyta;
Bryopsida; Punariidae; Funariales; Funariaceae; Physcomitrella.
                                               Additional Metazoa; Chordata; Craniata; Vertebrata; Euteleoston Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

(Lases 1 to 855)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: Gapbbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: CLONETECH Laboratories, Inc.

cDNA Library Arrayed by: The I.M.A.G.E.

CONA Library Arrayed by: The I.M.A.G.E.
                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:
http://inage.llnl.gov.
Plate: LLCMA497 row: o column: 21
High quality sequence stop: 594.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BJ600203 323 bp mRNA linear EST 22-OCTBJ60203 normalized full length cDNA library, chloronemata, caulonemata and rhizoid-like protonemata Physicomirrella patens subsp. patens cDNA clone pphn28014 3', mRNA sequence.
BJ600203 GI:37842195
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22709184
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Pred. No. 0.0031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'clone="IMAGE:4686572"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
      Homo sapiens (human)
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                                  Homo sapiens
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BJ600203/c
                                                                                                                                           AUTHORS
TITLE
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Gaps

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EST 03-MAR-2000

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Tel: 14 286 1800

Fax: 314 286 1800

Fax: 314 286 1800

Fax: 314 286 1800

Fax: 314 286 1800

Email: escewateon.watch.cdu

Libraries were constructed by Dr. Stavros Bashiardes as part of the plazaries were constructed by Dr. Stavros Bashiarden (Mr. and Physocantrella BT program (FEP) at the Univ. of Leeds (UR) and Physocantrella BT program (FEP) at the Univ. of Leeds (UR) and Colone please contact: colia Knight (c.d.Knightsleeds.ac.uk)

Clone please contact: Colia Knight (c.d.Knightsleeds.ac.uk)

Seq primer: 408P from Gibco

High quality sequence stop: 2318

(a) Logalism="BDYSOURCE LIPEDILIOSOS"

(c) Lype="MRN"

(d) Tref="taxon:3218"

(d) Lype="MRN"

(d) Tref="taxon:3218"

(d) Lype="MRN"

(d) Tref="taxon:3218"

(d) Loge="taxon:2218"

(d) Loge="taxo
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Query Match 6.0%; Score 28; DB 10; Length 345;
Best Local Similarity 100.0%; Pred. No. 0.0086;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Search completed: May 25, 2004, 19:19:03 Job time : 2889 secs

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Sequence Sequence Sequence Sequence Sequence

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Sequence

seq29-na-truncated.rni

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US-09-684-843A-3

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(cgn2_6/ptodata/2/ina/6A_COMB.seq:*

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APPLICANT: Ryan, James W.
APPLICANT: Sprinkle, Terry Joe Curtis
APPLICANT: Sprinkle, Terry Joe Curtis
APPLICANT: Sprinkle, Terry Joe Curtis
TITLE OF INVENTION: Human Aminopeptidase P Gene
FILE REFERENCE: MCG103
CURRENT APPLICATION NUMBER: US/09/146,053A
GURRENT FILING DATE: 1998-09-02
EARLIER APPLICATION NUMBER: 60/057,854
EARLIER PILING DATE: 1997-09-02
NUMBER OF SEQ ID NOS: 7
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Patent No. 6399349
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Matches 467; Conservative
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Sequence 14, Application US/08232463

Patent No. 5670367

GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SALENER, F. G.
APPLICANT: SALENER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS

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66 GCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAAGTCTC 125
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TITLE OF INVENTION: CYCLIC GMP DEPENDENT PROTEIN KINASE AS
                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/232,463
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 8.7%; Score 40.4; DB 1; Similarity 2.3%; Pred. No. 0.034; 5; Conservative 134; Mismatches 75;
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                                                                                                                                                                                                                                                                                                                                                                                                                        29,768
ER: 30472/114 IMMU
                                      Suite 500
                                                                                                                                                                                                                                                                                                                              FILING DATE:
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
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US-09-521-511C-10/c
; Sequence 10, Application US/09521511C
; Patent No. 655358
; Patent No. 655358
; APPLICANT: Gurnett, Anne
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road,
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schmatz, Dennis
Harris, Georgianna
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Donald, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (703)836-9300
(703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 899149
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
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US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
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Best Local Similarity
                                                                                          COUNTRY: USA
ZIP: 22313-0299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMMEDIATE SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
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APPLICANT:
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APPLICANT:
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                                                                                                                                                                                                          TITLE OF INVENTION: http://www.ntitle.com/DUCTANCE CALCIUM-
TITLE OF INVENTION: http://www.ntitle.com/DUCTANCE: A DIAGNOSTIC
TITLE OF INVENTION: MARKER AND THERABEUTIC TARGET
TITLE OF INVENTION: MARKER AND THERABEUTIC TARGET
TITLE OF INVENTION: MARKER AND THERABEUTIC TARGET
CURRENT APPLICATION NUMBER: US/09/565,590
CURRENT APPLICATION NUMBER: 09/115,446
PRIOR FILING DATE: 1998-01-08
NUMBER OF SEQ ID NOS: 15
SOFTWARE: FastSEQ for Windows Version 4.0
SOFTWARE: FastSEQ for Windows Version 4.0
LENGTH: 2521
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APPLICANT: Chandy, George K.
APPLICANT: Gargus, Jay J.
APPLICANT: Gargus, Jay J.
APPLICANT: Gargus, George
APPLICANT: Gargus, George
APPLICANT: Fartino, Emmanuelle
APPLICANT: Ralman, Katarin
TITLE OF INVENTION: MCASAYCNN3 SMALL CONDUCTANCE CALCIUM
TITLE OF INVENTION: MCASAYCNN3 SMALL CONDUCTANCE: A DIAGNOSTIC
TITLE OF INVENTION: MARKER AND THERAPEUTIC TARGET
TITLE OF INVENTION: MARKER AND THERAPEUTIC TARGET
TITLE OF INVENTION: MARKER AND THERAPEUTIC TARGET
TITLE REPLICATION NUMBER: US/09/115,446
CURRENT FILING DATE: 1998-07-14
BARLIER APPLICATION NUMBER: 60/052,556
BARLIER RILING DATE: 1998-07-15
BARLIER FILING DATE: 1998-01-08
NUMBER OF SEQ ID NOS: 15
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 5
LENGTH: 2526
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Pred. No. 0.21;
0; Mismatches
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Patent No. 6165719
GENERAL INFORMATION:
                            Sequence 1, Application US/09565590 Patent No. 6653100
                                                                                                 APPLICANT: Chandy, George K.
APPLICANT: Gargus, Jay J.
APPLICANT: Gutman, George
APPLICANT: Fantino, Emmanuelle
APPLICANT: Kalman, Katarin
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Best Local Similarity 64.7%;
Matches 55; Conservative C
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; LOCATION: (287)...(2479)
US-09-565-590-1
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US-09-115-446-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Homo sapiens
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          US-09-565-590-1/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
CHEMOTHERAPEUTIC TARGET FOR ANTIPROTOZOAL AGENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Chandy, George K.
APPLICANT: Chandy, George K.
APPLICANT: Gargus, Jay J.
APPLICANT: Gargus, Jay J.
APPLICANT: Gargus, Jay J.
APPLICANT: Gargus, George
APPLICANT: Fantino, Emmanuelle
APPLICANT: Kalman, Katarin
TITLE OF INVENTION: hKCA3/KCNN3 SMALL CONDUCTANCE CALCIUM
TITLE OF INVENTION: ACTIVATED POTASSIUM CHANNEL: A DIAGNOSTIC
TITLE OF INVENTION: ARKER AND THERAPEUTIC TARGET
TITLE OF INVENTION WHARER: US/09/115,446
CURRENT PAPLICATION NUMBER: US/09/115,446
CURRENT PAPLICATION NUMBER: 60/052,556
EARLIER RILING DATE: 1998-07-14
EARLIER PILING DATE: 1998-07-15
EARLIER PILING DATE: 1998-01-08
NUMBER OF SEQ ID NOS: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                      ch 8.2%; Score 38.2; DB 4; Length 4262;
1 Similarity 59.8%; Pred. No. 0.12;
64; Conservative 0; Mismatches 43; Indels 0
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       TITLE OF INVENTION: CHEMOTHERAPEUTIC TARGE FILE REFERENCE: 20362
CURRENT APPLICATION NUMBER: US/09/521,511C
CURRENT FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/129,058
PRIOR FILING DATE: 1999-04-13
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10
LENGTH: 4262
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Patent No. 6165719
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                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
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LOCATION: (287)...(2479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: PKG
US-09-521-511C-10
                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
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Best Local Similarity
Matches 55; Conserv
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Sequence 7, Application US/08468853
Patent No. 5670362
GENEAL INFORMATION:
APPLICANT: van den BOOGAART, Paul
APPLICANT: KOK, Jacobus Johannus
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US-09-539-333D-178
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OTHER INFORMATION: 99-15682-318
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Matches 88; Conservative
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LOCATION: 1842
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APPLICANT: Cohen, Daniel
APPLICANT: Chumakov, IIya
APPLICANT: Chumakov, IIya
APPLICANT: Chumakov, IIya
APPLICANT: Bihain, Bernard
APPLICANT: Bihain, Bernard
APPLICANT: Essioux, Laurent
TITLE OF INVENTION: SCHIZOPHRENIA ASSOCIATED GENES, PROTEINS AND BIALLELIC MARKERS
FILE REPERENCE: GENSET: 047AUS
CURRENT APPLICATION NUMBER: 200-03-30
CURRENT FILING DAFE: 200-03-30
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Best Local Similarity 64.7%; Pred. No. 0.21;
Matches 55; Conservative 0; Mismatches 30; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: ACCAJ/KCNN3 SMALL CONDUCTANCE CALCIUM TITLE OF INVENTION: ACTIVATED POTASSIUM CHANNEL: A DIAGNOS TITLE OF INVENTION: ACTIVATED POTASSIUM CHANNEL: A DIAGNOS TITLE OF INVENTION: ACTIVATED POTASSIUM CHANNEL: A DIAGNOS CURRENT PRELICATION NUMBER: US/09/565,590
CURRENT APPLICATION NUMBER: US/09/565,590
PRIOR FILING DATE: 1098-07-14
PRIOR FILING DATE: 1998-07-14
PRIOR FILING DATE: 1998-07-08
PRIOR FILING DATE: 1998-07-08
PRIOR FILING DATE: 1998-07-08
PRIOR FILING DATE: 1998-07-08
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FastSEQ for Windows Version 4.0
                                                                                                                                                                          101 GACTGGTCGGTGCCCAGAAGTCTC 125
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PRIOR APPLICATION NUMBER: US 60/126,903
PRIOR FILING DATE: 1999-03-30
PRIOR APPLICATION NUMBER: US 60/131,971
PRIOR FILING DATE: 1999-04-30
PRIOR APPLICATION NUMBER: US 60/132,065
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; Sequence 178, Application US/09539333D
; Patent No. 6476208
                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/09565590
Patent No. 6653100
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Gargus, Jay J.
APPLICANT: Gutman, George
APPLICANT: Fantino, Emmanuelle
APPLICANT: Kalman, Katarin
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Gargus, Jay J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , ORGANISM: Homo sapiens
US-09-565-590-5
                                                                                                                                                                                                                                                                                                                                                                                                                                  Chandy,
                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER SOFTWARE: FASTE SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                    -09-565-590-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
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2014 AAGAAATAAAGACATGAAAAGTGGCAAGACTTAATCTGATCTCTGTGTATGTGATGCTT 2073
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             345 ATACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCCTTCCCCTG 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        285 AAGAGGGTAGTGGGTGGGCTAGGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2134 GATTACTTAATTGAATTTATTTTATTTAATTTAAATCCAGATTACCAAAATT 2187
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: primer bind
LOCATION: 1665..1683
OTHER INFORMATION: downstream amplification primer, complement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 3001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: allele
LOCATION: 1501
OTHER INFORMATION: 99-15682-318 : polymorphic base A or T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.8%; Score 36.4; DB 4;
50.6%; Pred. No. 0.36;
tive 0; Mismatches 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: 1184..T202
OTHER INFORMATION: upstream amplification primer
FEATURE:
PRIOR FILING DATE: 1999-04-30
PRIOR APPLICATION NUMBER: US 60/143,928
PRIOR FILING DATE: 1999-07-14
PRIOR FILING DATE: 1999-07-14
PRIOR FILING DATE: 1999-07-27
PRIOR APPLICATION NUMBER: US 60/146,453
PRIOR FILING DATE: 1999-07-29
PRIOR FILING DATE: 1999-07-29
PRIOR FILING DATE: 1999-07-29
PRIOR PRILORATION NUMBER: US 60/162,288
PRIOR PRILORATION NUMBER: US 60/162,288
PRIOR PRILORATION NUMBER: US 09/416,384
PRIOR PRILORATION NUMBER: US 09/416,384
PRIOR PRILORATION NUMBER: US 09/416,384
PRIOR PRILORATION NUMBER: US 09/416,384
PRIOR FILING DATE: 1999-10-12
NUMBER OF SEQ 1D NOS: 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc binding
LOCATION: 1502..1521
OTHER INFORMATION: 99-15682-318.mis2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
NAME/KEY: misc binding
LOCATION: 1482-1500
OTHER INFORMATION: 99-15682-318.misl
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                                                                     5780289el Patent Department
                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATE: US/08/468,855
FILING DATE: 06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 7. Application US/08310357
Patent No. 5789233
GENERAL INFORMATION:
APPLICANT: Van den BOCGAART, Paul
APPLICANT: VCK, Jacobus Johannus
APPLICANT: VERMEULEN, Arnoldus Nicolaas
TITLE OF INVENTION: COCCIDIOSIS POULTRY VACCINE
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
7.7%; Score 35.8; DB 1;
Best Local Similarity 63.2%; Pred. No. 0.24;
Matches 55; Conservative 0; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 06-UTN-1995
CLASSIPRICATION: 435
PRICR APPLICATION DATA:
APPLICATION NUMBER: US 08/310,357
FILING DATE: 21-SEP-1994
PRICR APPLICATION DATA:
APPLICATION NUMBER: US 08/102,865
FILING DATE: 06-AUG-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/604,075
FILING DATE: 18-UTN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/604,075
FILING DATE: 18-UTN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 91.201.523.7
FILING DATE: 18-UTN-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER:
TELECOMUNICATION INFORMATION:
TELEPHONE: (301) 258-5200
INFORMATION FOR SEQ ID NO: 77:
SEQUENCE CHARACTERISTICS:
LENGTH: 800 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                              1300 Piccard Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: CDNA to mRNA
IMMEDIATE SOURCE:
CLONE: EAM20E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Mary E. Gormley REGISTRATION NUMBER:
      NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Akzo No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2..508
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                                                                                              STREET: 1300 Pic
CITY: Rockville
STATE: Maryland
                                                                                                                                                                                          U.S.A.
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; LOCATION: 2...5
US-08-468-855-7
                                                                                                                                                                                       COUNTRY: UZIP: 20850
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32; Indels
                                                                                                                                                                                                                             STATE: Maryland
CUUNTRY: U.S.A.

ZIP: 20850
COMPUTER READABLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/468,853
FLING APPLICATION TAA:
APPLICATION NUMBER: US/08/468,853
FLING APPLICATION NUMBER: US/08/468,853
FLING APPLICATION NUMBER: US/08/310,357
FILING APPLICATION NUMBER: US/08/310,357
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
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FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,865
FILING APPLICATION NUMBER: US/08/102,983
APPLICANT: VERMEULEN, Arnoldus Nicolaas
TITLE OF INVENTION: COCCIDIOSIS POULTRY VACCINE
NUMBER OF SEQUENCES: 10
CORRESSONDENCE ADDRESS:
ADDRESSEE: Akzo No. 5670362el Patent Department
STREET: 1300 Piccard Drive
CITY: Rockville
STATE: Maryland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
US-08-466-855-7/c
Sequence 7, Application US/08468855
Patent No. 5780289
GENERAL INFORMATION:
APPLICANT: van den BOOGAART, Paul
APPLICANT: YOR GOODS JOHANNS
APPLICANT: VERMEULEN, Arnoldus Nicolaas
TITLE OF INVENTION: COCCIDIOSIS POULTRY VACCINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TORNEY/AGENAL TORNES NAME: Mary E. Gormley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 34,409
REFERENCE/DOCKET NUMBER:
TELECOMUNICATION INFORMATION:
TELEPHONE: (301) 258-5200
INPORMATION FOR SEQ ID NO; 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: CI
IMMEDIATE SOURCE:
CLONE: Eam20E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) NAME/KEY:
, LOCATION:
US-08-468-853-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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Gaps

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STAIL.
COUNTRY: U.S.A.
ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
"""TITHER: IBM PC COMPALIBLE
"""TITHER: TRM PC COMPALIBLE
"""TITHER: TRM PC COMPALIBLE
                                                                                                                                                                                                                                                                                                                                                                                                             NAME: MATY B. GOTHLEY
REGISTRATION NUMBER: 34,409
REFRENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 258-5200
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                     34,409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: CDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 800 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 63.23
Matches 55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                       FILING DATE: 06 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMMEDIATE SOURCE:
CLONE: Eam20E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
US-08-468-857-7/c
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US-08-468-852-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            461 TTTTCGTCTCCAACTGCAGCTGCTGCAGCTGCAGCTGCTGCTGCTGTTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 7.7%; Score 35.8; DB 1; Length 800; Best Local Similarity 63.2%; Pred. No. 0.24; Matches 55; Conservative 0; Mismatches 32; Indels (
                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/310,357
FILING DATE:
CLASSIFICATION: 435
RICH APPLICATION DATA:
APPLICATION NUMBER: US/07/904,075
FILING DATE:
APPLICATION NUMBER: EP 91.201.523.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Akzo No. 5792644el Patent Department
STREET: 1300 Piccard Drive
CITY: Rockville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: van den BOOGAART, Paul
APPLICANT: Vacabus Johannus
APPLICANT: VERMEULEN, Arnoldus Nicolaas
TITLE OF INVENTION: COCCIDIOSIS POULTRY VACCINE
NUMBER OF SEQUENCES: 10
ADDRESSEE: Organon Teknika Corporation
ADDRESSEE: Biotechnology Research Institute
STREET: 1330-A Piccard Drive
CITY: Rockville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401 GCTGCTGCTGCCATGGTTCTTCAT 375
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                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 18-Jun-1991
ATTORNEY/AGENT INFORMATION:
NAME: William M. Blackstone
REGISTRATION NUMBER: 29,772
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 258-5200
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 800 base pairs
TYPE: nucleic acid
STRANDENNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application US/08468852
Patent No. 5792644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: CDNA to mRNA INMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
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                                                                                            COUNTRY: U.S.A.
ZIP: 20850
                                                                             STATE: Maryland
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
US-08-310-357-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
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461 TTTTCGTCTCCCAACTGCAGCTGCTGCAGCTGCAACTGCTGCTGCTGCTGTTGCTGCTGCT 402
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 7, Application US/08460857;
Patent No. 5925347
GENERAL INFORMATION:
APPLICANT: van den BOCGAART, Paul
APPLICANT: VERWEULEN, Arnoldus Nicolaas;
TITLE OF INVENTION: COCCIDIOSIS POULTRY VACCINE;
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: ARZO No. 5925347el Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Akzo No. 5925347el Patent Department
STREET: 1300 Piccard Drive
CITY: Rockville
STATE: Maryland
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/468,852
FILING DATE: 06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.7%; Score 35.8; Di
63.2%; Pred. No. 0.24;
tive 0; Mismatches
                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/310,357
FILING DATE: 21-SEP-1994
FRING APPLICATION DATA:
APPLICATION NUMBER: US 08/102,865
FILING DATE: 06-AUG-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/604,075
FILING DATE: 18-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 91.201.523.7
FILING DATE: 18-JUN-1991
ATTORNEY/AGENT INFORMATION:
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Gaps

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GCTGCTGCTTA 79
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) OTHER INFORMATION: Description of Artificial Sequence: Reverse gene; OTHER INFORMATION: construct corresponding to a specific region of; JOTHER INFORMATION: the mouse Ii gene.
US-09-205-75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: Reverse gene of The Information: OTHER INFORMATION: construct corresponding to a specific region of US-09-205-995-72
                                                                                                                                                                                                                                         0;
                                                                                                                                                                 7.6%; Score 35.6; DB 4; Length 107; 71.2%; Pred. No. 0.079; cive 0; Mismatches 19; Indels
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APPLICANT: Xu, Minzhen
APPLICANT: CAN, Gang
APPLICANT: Gu, Gang
APPLICANT: Humphreys, Robert
TITLE OF INVENTION: CANCER CELL VACCINE
FILE REFERENCE: U.S. Application 09/205, 995,
CURRENT APPLICATION NUMBER: US/09/205, 995
CURRENT PLING DATE: 1998-12-04
FRIOR PILING DATE: 1998-03-09
FRIOR PILING DATE: 1998-03-09
FRIOR PILING DATE: 1996-06-11
NUMBER: OS/036, 746
FRIOR PILING DATE: 1996-06-11
NUMBER: PALOR PILING DATE: 1996-06-11
NUMBER: PEROR FILING DATE: 1996-06-11
SEQ ID NO 72
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APPLICANT: Qiu, Gang
APPLICANT: Humphreys, Robert
IIILE OF INVENTION: CANCER CELL VACCINE
FILE REFERRING: U.S. Application 09/205,995,
CURRENT APPLICATION NUMBER: US/09/205,995
CURRENT FILLING DATE: 1998-12-04
                                                                                                                                                                                                                                                                                                         20 TCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCT
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; Patent No. 6368855
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
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                                                                                                                                                                 Query Match
Best Local Similarity 71.21
Matches 47; Conservative
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PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  80 AAGGCT 85
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; Patent No. 6368855
; GENERAL INFORMATION:
APPLICANT: Xu, Minzhen
; APPLICANT: Qiu, Gang
; APPLICANT: Humphreys, Robert
TITLE OF INVENTION: CANCER CELL VACCINE
; FILE REFERENCE: U.S. Application 09/205,995,
CURRENT APPLICANTON NUMBER: US/09/205,995
; CURRENT FILING DATE: 1998-03-09
; PRIOR FILING DATE: 1998-03-09
; PRIOR FILING DATE: 1998-06-11
; NUMBER OF SEQ ID NOS: 79
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 75
PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32;
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Pred. No. 0.24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 7.7%; Score 35.8; D: Similarity 63.2%; Pred. No. 0.24 55; Conservative 0; Mismatches
                                                                                                                                                      PRIOR APPLICATION DATE:
APPLICATION NUMBER: US 08/310,357
FILING DATE: 21-SEP-1994
PRIOR APPLICATION NUMBER: US 08/102,865
FILING DATE: 06-AUG-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/904,075
FILING DATE: 18-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 91.201.523.7
FILING DATE: 18-JUN-1991
ATTONNEY AGENT INFORMATION:
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   ...okR: US/08/468,857
06-JUN-1995
NN: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Mary E. Gormley
REGISTRATION NUMBER: 34,409
REFRENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 258-5200
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: CDNA to mRNA IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: mucleic acid
STRANDEDNESS: double
                            CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; NAME/KEY: CDS
; LOCATION: 2..508
US-08-468-857-7
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Best Local Similarity
Matches 55; Conserv
                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLONE: Eam20E
                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-205-995-75/c
SOFTWARE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179 TGTGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCAGCCCGTGGGGAAG 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 182 RKKGSCCMWKKYYTYMRRRGGKWRSYKGGSCMMCMMMMRGSCCSGGGGSCWWKSYKKWR 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      239 GGGAGAAAGTGGGGGATGGCTAAGAAAGCTGGGAGATAGGGAAACAGAAGAGGGTAGTGGG 298
                                                                                                                                                                                                                                                                                                                                                                                         20 TCCCCCAAGCCCCTTTACCTATGCTGCTAACGCTGCTGCTGCTGCTGCTGCTGCTGCTTA 79
                                                                                                                                                                                                                                                                                                                                                                                                                              122 SYWRRRKYYYSRARGSYYMWKKTYMAARSCMRSSGGSMRGRARGGGKTYSGSCMMMRRR
                                                                                                                                                                                                                                                                                                                                                   Gaps
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PRIOR APPLICATION NUMBER: 08/661,627

PRIOR FILING DATE: 1996-06-11

NUMBER OF SEQ ID NOS: 79

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 77

IMBGTH: 190

TYPE: DNA

ORGANISM: Artificial Sequence
FRATURE:
OTHER INFORMATION: Description of Artificial Sequence: Reverse gene FRATURE:
OTHER INFORMATION: the mouse II gene.
US-09-205-995-77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 16656, Application US/09621976
Patent No. 6639063
GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Johert, S.
APPLICANT: Gradno, J.Y.
ITLE OF INVENTION: ESTS and Encoded Human Proteins.
FILE REFERENCE: GENSET.054FR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 12.7%
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                           Best_Local Similarity 71.2
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299 TGGGCTAGG 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-621-976-16656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 GGKTYCSGS 54
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13 GTGTCT 8
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LENGTH: 430
                                                                                                                                                                                                                                                                                                         Query Match
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Sequence 2, Application US/08553110 Patent No. 5723301 GENERAL INFORMATION:

US-08-553-110-2/c

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41 TGCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGG 100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Nandabalan, Krishan
APPLICANT: Nandabalan, Krishan
APPLICANT: Kingsmore, Stephen
APPLICANT: Troberney, Valizar
TITLE OF INVENTION: Syndrome (HPS) Protein Complexes and HPS Protein-
TITLE OF INVENTION: Interacting Proteins
TITLE OF INVENTION: 1 Interacting Proteins
FILE REFERENCE: 1596-523
CURRENT APPLICATION NUMBER: US/09/266,225D
CURRENT FILING DATE: 1999-03-10
SUFFWARE: Patentin Ver. 2.1
SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
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APPLICANT: Burke, James R.
APPLICANT: Vance, Jeffrey M.
APPLICANT: Enghild, Jan
APPLICANT: Stritucatter, Warren J.
TITLE OF INVENTION: Therapeutics for Diseases Associated
TITLE OF INVENTION: with CAG Trinucleotide Repeat Expansion
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Kenneth D. Sibley
                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,110
                                                                                                                                                                                                                       STREET: P.O. Drawer 34009 1
TTY: Charlotte
STATE: No. 5723301th Carolina
COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                    ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICALL...
FILING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: SIDLEY, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5405.
TELECOMMUNICATION INFORMATION:
"""TYPHONE: 1919-420-2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-266-225D-17/c
; Sequence 17, Application US/09266225D
Patent No. 6573364
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1184 GGGTGGGCGGTGGACTG 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 GACTGGTCGGTGCCCAG 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 919-881-3175
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1853 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 66.29
Matches 51, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear

MOLECULE TYPE: peptide

US-08-553-110-2
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US-09-266-225D-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 4168
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41 TGCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGG
                                             Gaps
                                         0;
Score 35.4; DB 4; Length 4168; Pred. No. 0.92; 0; Mismatches 26; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 4279;
                                                                                                                                                                                                                                                                                                        Sequence 22, Application US/09041886
Patent No. 6235872
GENERAL INFORMATION:
APPLICANT: Bredesen, Dale E.
APPLICANT: Rabizadeh, Sharroz
TITLE OF INVENTION: Proapoptotic Peptides, Dependence
TITLE OF INVENTION: Polypeptides and Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER REALPABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 35.4; DB 3;
Pred. No. 0.94;
0; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION UNDHER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ 2626
TELECOMMUNICATION INFORMATION:
TELEFHONE: (619) 535-9001
TELEFAN: (619) 535-9001
TELEFAN: (619) 535-9001
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                        1491 GGGTGGCCGTGGACTG 1475
                                                                                                                                                                   101 GACTGGTCGGTGCCCAG 117
  7.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 66.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 4279 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: California
COUNTRY: United States
ZIP: 92122
                                         51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
239..3794
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                           US-09-041-886-22/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY:
; LOCATION:
US-09-041-886-22
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                                       Matches
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2983 CCCCTTGACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCCGC 2936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 3311;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Unknown Organism: amyA gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 CCCCTTTACCTATGCTGCTACCTAACGCTGCTGCTGCTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                        APPLICANT: Gaffney, Thomas
APPLICANT: Flavier, Albert
APPLICANT: Flavier, Albert
APPLICANT: Gates, Krista
APPLICANT: Mandland, Juergen
APPLICANT: Ayad-Durieux, Yasmina
APPLICANT: Philippsen, Peter
TITLE OF INVENTION: Fungal Target Genes and Methods
FILE REFERENCE: PB/5-30908A
CURRENT APPLICATION NUMBER: US/09/588,256
CURRENT FILING DATE: 2000-06-05
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 GACTGGTCGGTGCCCAGAAAGTCTCTTCTGCCACTG 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 35.2; DB 3;
Pred. No. 0.71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113 GACTGATGTGAGCCCTGCTCCATGTATGCACTG 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.5%; Score 35.2; DB 4;
83.3%; Pred. No. 0.92;
ttive 0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5, Application US/09367891A
Patent No. 6524816
GENERAL INFORMATION:
TITLE OF INVENTION: EXPRESSION ELEMENT
FILLE REFRENCE: 078883/0111
CURRENT APPLICATION NUMBER: US/09/367,891A;
CURRENT FILING DATE: 1999-12-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: PCT/1B98/00312
PRIOR FILING DATE: 1998-03-02
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 5
LENGTH: 3311
Sequence 1, Application US/09588256
Patent No. 6291665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Unknown Organism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 7.5
Best Local Similarity 60.4
Matches 58; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 83.3
Matches 40; Conservative
                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Ashbya gossypii
                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: (1)..(2160)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 22
US-09-367-891A-5/c
                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 1
LENGTH: 2160
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RESULT 23 US-09-976-594-306/c ; Sequence 306, Application US/09976594

41 IGCTGCTGCTAACGCTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGG 100

1659 GGGTGGCGGTGGACTG 1643

RESULT 21

101 GACTGGTCGGTGCCCAG 117

Gaps

0;

26; Indels

51; Conservative

Matches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8325 GGGTAAGCTGCCTGCCCTGCCCCACGTCCTGGGCACACACGATGGGGTAGGGGGTCTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189 GCCTCATCGGCCTGCCATGACCTGCAGCCAAGCCCCAGCCCCGTGGGGAAGGGGAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.5%; Score 35.2; DB 1; Length 10807;
49.5%; Pred. No. 1.9;
tive 0; Mismatches 93; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/08756506

Patent No. 5905185
GENERAL INFORMATION:
APPLICANT: Centingham, Ian R.
APPLICANT: Temperley, Simon M.
APPLICANT: Temperley, Simon M.
APPLICANT: Porecher, Cindy A.
APPLICANT: Protect, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patentin Release #1.0, Version #1.25
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APPLICATION NUMBER: US/08/756,50
TELECOMMUNICATION INFORMATION:
TELEPRONE: 206-547-8080 ext 322
TELEPAX: 206-548-2329
INFORMATION FOR SEQ ID NO: 7;
SEQUENCE CHARACTERISTICS:
LENGTH: 10807 base pairs
                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear IMMEDIATE SOURCE: CLONE: ovine beta-lactoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 9: TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 7.5
Best Local Similarity 49.5
Matches 91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 206-442-6678
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                                                                                                                                                                                                                                                                           TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8445 GGTC 8448
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CITY: Seattle
STATE: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309 GGGC 312
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UN
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US-08-756-506-5
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                            GENERAL IN: 00.237
GENERAL IN: 00.237
GENERAL IN: 00.237
APPLICANT: Furness, Michael
APPLICANT: Buchbinder, Jenny
TITLE OF INVENTION: GENES EXPRESSED IN C3A LIVER CELL CULTURES TREATED WITH STEROIDS
FILE REFERENCE: PA-0041 US
CURRENT APPLICATION NUMBER: US/09/976,594
CURRENT APPLICATION NUMBER: 02/01-10-12
PRIOR FILING DATE: 2000-10-12
NUMBER OF SEQ ID NOS: 1143
SQUIPMER: PERL PROGRAM
SEQ ID NO 306
LENGTH: 9053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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APPLICANT: Garner, Ian
APPLICANT: Dalrymple, Michael A
APPLICANT: Prunkard, Donna E
APPLICANT: Foster, Donnald C
TITLE OF INVENTION: Production of Fibrinogen in Transgenic
TITLE OF INVENTION: Animals
CORRESPONDENCE: 27
CORRESPONDENCE 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
OTHER INFORMATION: Incyte ID No. 6673549 898877.6
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COATION: 2006, 2012

COTHER INFORMATION: a, t, c, g, or other

US-09-976-594-306
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7, Application US/08206176
Patent No. 5639940
GENERAL INFORMATION:
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REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION: 435
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Patent No. 6673549
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STATE:
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7.5%; Score 35; DB 3; Length 10348; 88.4%; 2red. No. 2.2; ive 0; Mismatches 5; Indels 0
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                   APPLICANT: Nasir, Jamal TITLE OF INVENTION: Mouse Model for Huntington's Disease TITLE OF INVENTION: Related DNA Sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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APPLICANT: Ross, Christopher
APPLICANT: Li, Xiao-Jiang
APPLICANT: Li, Xiao-Jiang
APPLICANT: Li, Xiao-Jiang
APPLICANT: Sharp, Alan
APPLICANT: Sharp, Alan
APPLICANT: Worley, Paul
APPLICANT: Worley, Paul
APPLICANT: Snyder, Solomon
TITLE OF INVENTION: Huntingtin-associated protein
FILE REPERENCE: 01107,52271.
CURRENT APPLICATION NUMBER: US/08/556,419C
CURRENT FILING DATE: 1995-11-09
                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/457,273B
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Pred. No. 2.2;
0; Mismatches
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SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-556-419-13/c
; Sequence 13, Application US/08556419C
; Patent No. 6093549
                                                                                                                                             STREET: PO Box 37428
CITY: Raleigh
STATE: No. 5849995th Carolina
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Bennett, Virginia C.
REGISTRATION NUMBER: 37,092
REFERENCE/DOCKET NUMBER: 347
                                                                                NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
ADDRESSEE: Virginia Bennett
STREET: PO BOX 37428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-854-1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 41: SEQUENCE CHARACTERISTICS: LENGTH: 10348 base pairs TYPE: mucleic acid strandedness; single
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Best Local Similarity 88.4%;
Matches 38; Conservative
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    APPLICANT: Lin, Biaoyang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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CLASSIFICATION: 800
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Best Local Similarity
Matches 38; Conserv
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LENGTH: 10348
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                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:

APPLICANT: Pan, Yang

TITLE OF INVENTION: NOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY

TITLE OF INVENTION: AND USES THEREOF

FILE REFERENCE: 09404/052001

CURRENT APPLICATION NUMBER: US/09/128,155

CURRENT APPLICATION NUMBER: US 60/091,650

EARLIER FILING DATE: 1998-03-03

EARLIER FILING DATE: 1998-07-02

EARLIER FILING DATE: 1997-08-04

NUMBER OF SEQ ID NOS: 18

SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                       Gaps
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                                                                                                                              DB 2; Length 10807;
                                                                                                                                                                     93; Indels
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68.1%; Pred. No. 11;
tive 0; Mismatches
                                                                                                                                Score 35.2; D
Pred. No. 1.9;
                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 41, Application US/08457273B
Patent No. 5849995
GENERAL INFORMATION:
APPLICANT: Hayden, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 17, Application US/09128155
Patent No. 6117654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NAME/KEY: misc_feature
| LOCATION: (1)...(176373)
| OTHER INFORMATION: n = A,T,C or G
US-09-128-155-17
                                                                                                                           Query Match
Best Local Similarity 49.5%;
Matches 91; Conservative
LENGTH: 10807 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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Best Local Similarity 68.1%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CIGCIGCIGCII 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapiens
                                                                 ; TOPOLOGY: linear
US-08-756-506-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8445 GGTC 8448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                309 GGGC 312
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 17
LENGTH: 176373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 26
US-09-128-155-17
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US-08-453-265-5/c
; Sequence 5, Application US/08453265
; Ratent No. 5693757
; Patent No. 5693757
; Patent No. 5693757
; APPLICANT: MacDonald, Marcy E.
APPLICANT: Ambrose, Christine M.
; APPLICANT: Gusella, James F.
; TITLE OF INVENTION: Huntingtin DNA, Protein And Uses Thereof
; NUMBER OF SEQUENCES: 25
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
; STREET: 1100 New York Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 35; DB 1; Length 10366;
Pred. No. 2.2;
0; Mismatches 5; Indels
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: TEN PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/246,982A
FILING DATE: May 20, 1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge, A.
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.3880002
TELECOMMUNICATION INFORMATION:
TELEPAN: (202) 371-2600
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 10366 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Ludwig, Steven R.
REGISTRATION NUMBER: 36,203
REFERENCE/DOCKET NUMBER: 0609.3880003
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 7.5%;
Best Local Similarity 88.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
316..9748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Washington STATE: D.C.
CITY: Washington STATE: D.C.
                                             U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
US-08-246-982A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                  COUNTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   П
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Patent No. 5686288
GENERAL INFORMATION:
APPLICANT: MacDonald, Marcy E.
APPLICANT: Ambrose, Christine M.
APPLICANT: Gusella, James F.
TITLE OF INVENTION: Huntingtin DNA, Protein And Uses Thereof NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
7.5%; Score 35; DB 3; Length 10348;
Best Local Similarity 88.4%; Pred. No. 2.2;
Matches 38; Conservative 0; Mismatches 5; Indels (
                                                                                                                                        US-09-041-886-14/c
; Sequence 14, Application US/09041886
; Patent No. 6238972
; REMEAL INFORMATION:
   APPLICANT: Bredesen, Dale E.
   APPLICANT: Rabizadeh, Sharroz
   TITLE OF INVENTION: Proapoptotic Peptides, Dependence
   TITLE OF INVENTION: Polypeptides and Methods of Use
   NUMBER OF SEQUENCES: 72
   CORRESPONDENCE ADDRESS:
   ADDRESSEE: ADDRESSE:
   CAMPBELS: 4370 La Jolla Village Drive, Suite 700
   CITY: San Diego
   STATE: California
   COUNTRY: United States
   COUNTRY: United States
                                                     41 recrectectaacectectectectectectectraaace 83
     41 IGCIGCIGCIAACGCIGCIGCIGCIGCIGCIGCITAAAGG 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sterne, Kessler, Goldstein & Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION UNDHER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ 2626
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
TELEPHONE: (619) 535-9001
TELEPHONE: (619) 535-9001
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 10348 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
316..9748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 30
US-08-246-982A-5/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; NAME/KEY:
; LOCATION:
US-09-041-886-14
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41 TGCTGCTGCTAACGCTGCTGCTGCTGCTGCTTGCTTAAAAGGCTCATGCTTGGAGTGGG 100
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                                                                                  Gaps
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                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: MacLeod Dr., Carol L.
APPLICANT: MacLeod Dr., Carol L.
TITLE OF INVENTION: No. 5440017el T-cell Lymphoma cDNA Clones
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Patent Department, Fulbright & Jaworski
STREET: 1301 McKinney, Suite 5100
CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                          DB 1; Length 3819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 3819;
                                                                                  22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 77010-3095
ZIP: 77010-3095
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
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                                          7.5%; Score 34.8; D 68.6%; Fred. No. 1.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/686,322
FILING DATE: 11-APPR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Adler, Benjamin A.
REGISTRATION NUMBER: 35,423
REFERENCE/DOCKET NUMBER: D-5232-DIV
TELEPHONE: (713) 651-5587
TELEPHONE: (713) 651-5587
TELEPHONE: (713) 651-5587
TELEFEX: Weetern Union 762829
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3819 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SL12 cell line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/002,999
FILLING DATE: 19930111
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                         US-08-002-999-3/c; Sequence 3, Application US/08002999; Patent No. 5440017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN: AKRI Jackson
INDIVIDUAL ISOLATE: SL12 cell
TISSUE TYPE: Lymphoma
CELL TYPE: T-cell
CELL LINE: SL12.3 and SL12.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA to mRNA ORIGINAL SOURCE:
ORIGINAL SOURCE:
ORGANISM: MOUSE
                                          Query Match
Best Local Similarity 68.63
Matches 48; Conservative
                                                                                                                                                                                                                                                        1802 ATGATGTGGG 1793
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CLONE: 19.4
    US-07-686-322A-3
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Sequence 3, Application US/07686322A

Patent No. 531273713

GENERAL INFORMATION:

APPLICANT: MacLeod Dr., Carol L.

TITLE OF INVENTION: No. 5312733el T-cell Lymphoma cDNA Clones

NUMBER OF SEQUENCES: 6

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                               Score 35; DB 1; Length 10366; Pred. No. 2.2;
                                                                                                                                                                                                                                                                                                                       5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          41 IGCIGCIGCIAACGCIGCIGCIGCIGCIGCIGCIGCITAAAGG 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Patent Department, Fulbright & Jaworski STREET: 1301 McKinney, Suit 5100 CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER FEADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILING DATE: 19910411
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/509684
FILING DATE: 13-APR-1990
ATTORNEY/AGENT INFORMATION:
NAME: LAUNEY, Charlene A.
REGISTRATION NUMBER: 33,035
REPRENCE/DOCKET NUMBER: D-5232-CIP
TELECOMMUNICATION INFORMATION:
TELEPRONE: (713) 651-3646
TELEX: (713) 651-3646
TELEX: (713) 651-3646
TELEX: (713) 651-5246
TELEX: (713) 651-5246
TELEX: (713) 651-5654
TELEX: (713) 651-5654
TELEX: (713) 651-5654
TELEX: (713) 651-5676
TELEX: (713) 651-5676
TELEX: (713) 651-5676
TELEX: NOSECUL NIO: 3:
SEQUENCE CHARACTERISTICS:
TYPE: NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SL12 cell line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE TYPE: Lymphoma
CELL TYPE: T-cell
CELL INE: SL12.3 and SL12.4
IMMEDIATE SOURCE:
TELEPHONE: (202) 371-2600
TELEPAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                             Query Match 7.5%;
Best Local Similarity 88.4%;
Matches 38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: CDNA to mRNA
                                                                            LENGTH: 10366 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGINAL SOURCE:
ORGANISM: Mouse
STRAIN: AKRI Jackson
INDIVIDUAL ISOLATE: 6
                                                                                                                                                                                          CDS
316..9748
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STATE: Ten.
COUNTRY: USA
T7010-3095
TADBLE F
                                                                                                                                                   linear
                                                                                                       TYPE: nucleic
STRANDEDNESS:
TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLONE: 19.4
                                                                                                                                                                                     ; NAME/KEY:
; LOCATION:
US-08-453-265-5
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Indels
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APPLICANT: Ranum et al.
ITLE OF INVENTION: SCA7 GENE AND METHODS OF USE
FILE REFERENCE: University of Minnesota
CURRENT APPLICATION NUMBER: US/09/135,994A
CURRENT FILING DATE: 1998-08-18
EARLIER APPLICATION NUMBER: 60/056,170
EARLIER FILING DATE: 1997-08-19
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver: 2.0
                                                                                                                                                                                                                                                                                          Score 34.4; DB 3;
Pred. No. 0.43;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 GACTGGTCGGTGCCCAGAAGTCTCTGCC 132
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                                                                                                                                                                                                                                                                                          7.4%;
78.8%;
                                                                                                                                                                                                                                                                                            Query Match 7.45
Best Local Similarity 78.85
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 56; Conserv
                                                                                                                                                                                                                 TYPE: DNA ORGANISM: human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-684-843A-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 36
US-09-135-994-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        477
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
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1862 IGCTGCTGTTGCTGCTGCTGCTGCTGCTGCTGAAACTGTTCTGCTGGAACGTGG 1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/08531927B
Patent No. 5840491
GENERAL INFORMATION:
APPLICANT: RAKLEUKA, Akira
TITLE OF INVENTION: DNA Sequence Encoding the Machado-Joseph
Patent No. 5840491
TITLE OF INVENTION: Disease Gene and Uses Thereof
NUMBER OF SEQUENCES: 23
CORRESPONDENCES. 23
CORRESPONDENCE ADDRESSE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.4%; Score 34.4; DB 2; Length 325; 78.8%; Pred. No. 0.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 02173-4799

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/531,927B
FILING DATE: 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP H6-251600
FILING DATE: 21-SEP-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 35
US-09-253-691-3/c
; Sequence 3, Application US/09253691
; Patent No. 6124100
; GENERAL INFORMATION:
; APPLICANT: Dong Kyu JIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32,227
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TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 617-861-9540
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 325 base pairs
TYPE: mucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Granahan, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified_base
194
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                                                                                                1802 ATGATGTGG 1793
                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Lexington
STATE: Massachusetts
                                                           101 GACTGGTCGG 110
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Matches 41; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 21 CLASSIFICATION:
                                                                                                                                                                          US-08-531-927B-3/c
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TITLE OF INVENTION: Diagnostic Method and Kit for Neuropsychiatric Diseases TITLE OF INVENTION: Using Trinucleotide Repeats Sequence FILE REFERENCE: 1942/36
CURRENT APPLICATION NUMBER: US/09/253,691
CURRENT FILING DATE: 1999-02-22
BARLIER APPLICATION NUMBER: KR 98-6,278
EARLIER FILING DATE: 1996-02-26
NUMBER OF SEQ ID NOS: 3
SOFTWARE: WordPerfect 6.1/Windows
SEQ ID NO 3.
LENGTH: 397
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      APPLICANT: Ranum et al.
APPLICANT: Ranum et al.
TITLE OF INVENTION: SCA7 GENE AND METHODS OF USE
FITLE OF INVENTION: SCA7 GENE AND METHODS OF USE
FILE REFERENCE: Regents of the University of Minnesota
CURRENT APPLICATION NUMBER: US/09/684,843A
CURRENT FILING DATE: 2000-10-06
PRIOR APPLICATION NUMBER: 60/056,170
PRIOR APPLICATION NUMBER: 09/135,994
PRIOR PILING DATE: 1998-08-18
NUMBER OF SCO ID NOS: 14
SOFTWARE: Patentin Ver. 2.0
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PBst Local Similarity 86.4%; Pred. No. 0.93;
Matches 38; Conservative 0; Mismatches 6; Indels 0
                                                                                                                          Ouery Match 7.4%; Score 34.4; DB 4; Length 477; Best Local Similarity 60.9%; Pred. No. 0.49; Matches 56; Conservative 0; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-481-814A-3/C
; Sequence 3, Application US/08481814A
; Patent No. 5869040
; GENERAL INFORMATION:
; APPLICANT: Hsu, Yen-Ming
; TITLE OF INVENTION: GENE THERAPY METHODS AND COMPOSITIONS
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: 63.71301
OTHER INFORMATION: /function= "transcription factor"
OTHER INFORMATION: /product= "E2F-4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATE:
APPLICATION NUMBER: US/08/481,814A
                                                                                                                                                                                                                                                                                                   101 GACTGGTGGCCCAGAAGTCTCTGCC 132
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STATE: Massachusetts
~~nmRX: United States of America
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STREET: 14 Cambridge Center
CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Kaplan, Warren A
REFERENCE/DOCKET NUMBER: AC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-679-2000
TELEFEAX: 617-679-2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 617-679-2838
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
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CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1332 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: mat_peptide
                                              TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-481-814A-3
                                                                                      US-09-684-843A-1
SEQ ID NO 1
LENGTH: 477
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Gaps
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFFWARR: Parentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/836,582
FTLING DATE: 14-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 TIACCIAIGCIGCIGCIAACGCIGCIGCIGCIGCIGCIGCIGCI
                                                                                   Sequence 1, Application US/08836582
Patent No. 6045999
GENERAL INCERMATION:
APPLICANT: Bernards, Rene
APPLICANT: Belierbergen, Roderick L
TITLE OF INVENTION: Transcription factor E2F-4
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon & Vanderhye
STREET: 1100 No. 6045999th Glebe Road, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 7.4%; Score 34.4; DB 3; Il Similarity 86.4%; Pred. No. 1; 38; Conservative 0; Mismatches 6;
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB95/00868
FILING DATE: 18-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9423049.7
FILING DATE: 15-NOV-1994
ATTORNEY-AGBNT INFORMATION:
NAME: ALTDUR R. CTAWFORG
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 620-18
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1489 base pairs
...... nucleic acid
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Best Local Similarity
                                                                                                                                                                                                                                                                                       Virginia
                                                                                                                                                                                                                                                               CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 40
US-09-265-566-1/C
                                                     RESULT 39
US-08-836-582-1/c
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US-08-836-582-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                  COUNTRY:
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Sequence 871, Application US/09023655
; Sequence 871, Application US/09023655
; Patent No. 6607879
; GENERAL INFORMATION:
APPLICANT: Cocks Benjamin G.
APPLICANT: Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF BLOOD CELL GENE
TITLE OF INVENTION: EXPRESSION
NUMBER OF SEQUENCES: 1508
; CORRESPONDENCE ADDRESS: 1508
;
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MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: ELOPPY disk
COMPUTER: DEM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/023,655
FILING DATE: HERBWITH
CLASSIFICATION:
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7.4%; Score 34.4; Di
Best Local Similarity 86.4%; Pred. No. 1;
Matches 38; Conservative 0; Mismatches
                                           REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 620-63
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
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CLASSIFICATION:
ATTORNEY, AGENT INFORMATION:
NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0001 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 845-9166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOCATION: 27.1268
; SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-242-737-3
                                                                                                                                                                                                                                                                                LENGTH: 1489 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 871:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: 27..1268
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STRANDEDNESS: sing
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US-09-023-655-871/c
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Sequence 3, Application US/09242737
Patent No. 6368809
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: BERNARDS, REN(
TITLE OF INVENTION: E2F UBIQUITINATION DOMAIN, AND ASSAYS FOR INFIBITORS OF E2F UBIQUITINATION
ZIP: 22201-4714

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25 (BPO)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/265,566

FILING DATE: 1D-Mar-1999

CLASSIFICATION: <UNKNOWN>

15-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
7.4%; Score 34.4; DB 4; Length 1489;
Best Local Similarity 86.4%; Pred. No. 1;
Matches 38; Conservative 0; Mismatches 6; Indels 0
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COUNTRY U.S. A.

ZIP: 22201-4714

COMPUTER READABLE FORM
WEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PATENTIN Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/242,737

FILING DATE: 23-PE-1999

CLASSIFCATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          991 iikcremiechechechechechechechechechechechech 948
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                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/836,582
FILING DATE: «Unknown>
APPLICATION NUMBER: 08 9423049.7
FILING DATE: 15-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: ATTORNEY REGISTRATION NUMBER: 25,327
REGISTRATION NUMBER: 25,327
REPERENCE/DOCKET NUMBER: 620-18
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1489 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/GB97/02293
FILING DATE: 22-AUG-1997
APPLICATION NUMBER: GB 9617697.9
FILING DATE: 23-AUG-1996
ATTORNEY/AGENT INFORMATION:
NAME: WILSON, MARY J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS;
ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 27..1268
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: VIRGINIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-242-737-3/c
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seq29-na-truncated.rni

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APPLICANT: Rabizadeh, Sharroz
TITLE OF INVENTION: Proapoptotic Peptides, Dependence
TITLE OF INVENTION: Polypeptides and Methods of Use
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                  ZIP: 92122
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/041,886
                                                                                                             E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08479913E Patent No. 6416998
                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,915
REFERENCE/DOCKET NUMBER: P-LJ
TELECOMMUNICATION INFORMATION:
TELEFAN: (619) 535-9901
TELEFAX: (619) 535-9901
TELEFAX: (619) 535-9901
TELEFAX: (619) 535-9949
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear _ MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: O'Malley, Bert W.
                                                                                                                                  STREET: 4370 La Jolla V
CITY: San Diego
STATE: California
COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
36..1116
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Matches 41; Conserva
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US-08-479-913E-1/C
                                                                                                               ADDRESSEE:
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; LOCATION:
US-09-041-886-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
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US-08-531-927B-1/c

Sequence 1, Application US/08531927B

Patent No. 5440491

APPLICANT: KAKIZUKA, Akira

TITLE OF INVENTION:
Patent No. 5840491

TITLE OF INVENTION:
Patent No. 5840491

TITLE OF INVENTION:
Disease Gene and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.4%; Score 34.4; DB 4; Length 1489; 86.4%; Pred. No. 1; tive 0; Mismatches 6; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 7.4%; Score 34.4; DB 2; Length 1776; Best Local Similarity 78.8%; Pred. No. 1.1; Matches 41; Conservative 0; Mismatches 11; Indels 0
                                                                                                                                  34 TTACCTATGCTGCTAACGCTGCTGCTGCTGCTGCTGCTGCTGCT
                                                                                                                                                                             NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSED: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY. USA

ZIP: 02173-4799

ZIP: 02173-4799

COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OFFRATING SYSTEM: PC-DOS/NS-DOS
SOFFWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/531,927B

FILING BAPLICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP H6-251600

FILING DATE: 21-SEP-1994

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     994 Agencececngenecreciecrecrecrecrecre
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REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: A:195-01A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12, Application US/09041886
Patent No. 6235873
GENERAL INFORMATION:
APPLICANT: Bredesen, Dale E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELBFAX: 617-861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1776 base pairs
                                    Query Match /.*
Best Local Similarity 86.4
Matches 38, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Lexington
STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ) NAME/KEY: CDS
; LOCATION: 36..1115
US-08-531-9278-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
    US-09-023-655-871
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APPLICANT: Tsai, Mig-Jer
APPLICANT: Tsai, Mig-Jer
APPLICANT: Ledebur, Harry C.
APPLICANT: Kittle, Joseph D.
TITLE OF INVENTION: MODIFIED STEROID HORMONES FOR GENE THERAPY AND METHODS FOR THEIR (FILE REFERENCE: 212/133
CURRENT APPLICATION NUMBER: US/08/479,913E
CURRENT FILING DATE: 1995-06-07
PRIOR FILING DATE: 1995-09-02
NUMBER OF SEQ ID NOS: 6
SOFTWARE: MicroSoft Word 97
SEQ ID NO 1
LENGTH: 6177
                                                                .
0
                                                                                                                                                                          26 AAGCCCCTTTACCTATGCTGCTACTACGCTGCTGCTGCTGCTGCTGCTGCTGCT
ch 7.4%; Score 34.4; DB 3; Length 1776; Il Similarity 78.8%; Pred. No. 1.1; 41; Conservative 0; Mismatches 11; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; NAME/KEY: misc_feature
; OTHER INFORMATION: Plasmid pGRO403R
US-08-479-913E-1
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                                                                                                                                        Hager Ph.D., Gordon L.
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR MONITORING
DNA BINDING MOLECULES IN LIVING CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
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                                                           0;
                                                                                                                                                                                                                                                                                                  APPLICANT: The Government of the United States of America as respresented by the Secretary Department of Health and Human Services Washington, D.C. Htun Ph.D., Han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 7.4%; Score 34.4; DB 4; Length 7257; Best Local Similarity 78.8%; Pred. No. 2.7; Matches 41; Conservative 0; Mismatches 11; Indels 0
                                                                                                    DB 4; Length 6177;
                                                           11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA: US/09/091,042A
FILING DATE: 08-Jun-1998
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Needle & Rosenberg
STREET: 127 Peachtree Street, Suite 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 60/008,373
FILING DATE: 08 Dec 1995
ATTORNEY/AGRY INFORMATION:
NAME: Selby, Elizabeth
REGISTRATION NUMBER: 38298
REFERENCE/DOCKET NUMBER: 14014.0183
TELECOMMUNICATION INFORMATION:
TELEFRONE: 404-688-0770
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
IENGTH: 7257 base pairs
                   7.4%; Score 34.4; DE 78.8%; Pred. No. 2.5; cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , NAME/KEY: CDS
; LOCATION: 1072..4284
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-091-042A-1
                                                                                                                                                                                                                     US-09-091-042A-1/c
; Sequence 1, Application US/09091042A
; Patent No. 6455300
; Patent No. FORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: nucleic acid FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 30303
COMPUTER READABLE FORM:
Query Match
Best Local Similarity 78.5"
"Thes 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                  RESULT 46
                                                                                                    ò
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RESULT 47

26 AAGCCCCTTTACCTATGCTGCTGCTACCTGCTGCTGCTGCTGCTGCTGCTTGTT

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GENERAL INFORMATION:

APPLICANT: Bult et al.

TITLE OF INVENTION: Complete Genome Sequence of the Methanogenic Archaeon, Methanococompatent No. 6503729

TITLE OF INVENTION: jannaschii

TITLE OF INVENTION: NUMBER: US/08/916,421B

PRIOR FILING DATE: 1996-08-22

NUMBER OF SEQ ID NOS: 3

SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
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7.4%; Score 34.4; DB 4; Length 50000;
Best Local Similarity 57.4%; Pred. No. 9.2;
Matches 62; Conservative 0; Mismatches 46; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1313 Aregeladecegardadecadadacacadaaaaddaaddecadaadaada 1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219 AGCCCAGCCCCGTGGGGAAGGGGAAAGTGGGGGGATGGCTAAGAAAG 266
                                                       GENERAL NO. 0232323

GENERAL NO. 0232323

APPLICANT: Ryan, James W.
APPLICANT: Sprinkle, Terry Joe Curtis
APPLICANT: Sprinkle, Terry Joe Curtis
TITLE OF INVENTION: Human Aminopeptidase P Gene
FILE REFERENCE: MCG103
CURRENT APPLICATION NUMBER: US/09/146,053A
CURRENT FILING DATE: 1998-09-02
EARLIER APPLICATION NUMBER: 60/057,854
EARLIER FILING DATE: 1997-09-02
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ы
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LOCATION: (98120)..(98120)
OTHER INFORMATION: n equals a, t, c, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08916421B Patent No. 6503729
                  Sequence 4, Application US/09146053A
Patent No. 6399349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Methanococcus jannaschii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: (28222)..(28222)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature
LOCATION: (84773)..(84773)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature
LOCATION: (84808)..(84808)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
LOCATION: (28257)..(28258)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc feature
LOCATION: (84812)..(84812)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 1664976
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SEQ ID NO 4
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US-09-146-053-4
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NAME/KEY: misc feature // IOCATION: (1664854)..(1664855) // OTHER INFORMATION: n equals a, t, c, or g US-08-916-421B-1 g ö or or ö Ö or $^{\rm or}$ or or o ö or g or or ör or ΰ ο ΰ Ĺ, NAME/KEY: misc feature LOCATION: (871619)..(871619) OTHER INFORMATION: n equals a, t, NAME/KEY: misc_feature LOCATION: (741684)...(741684) OTHER INFORMATION: n equals a, t, NAME/KEY: misc_feature LOCATION: (779455)...(779455) OTHER INFORMATION: n equals a, t, NAME/KEY: misc_feature LOCATION: (779676)...(779676) OTHER INFORMATION: n equals a, t, NAME/KEX: misc feature
LOCATION: (1084830) . (1084830)
OTHER INFORMATION: n equals a, t,
NAME/KEX: misc feature
LOCATION: (1096846) . (1096846)
OTHER INFORMATION: n equals a, t,
NAME/KEX: misc feature
LOCATION: (1119881) . (1119881)
OTHER INFORMATION: n equals a, t,
NAME/KEX: misc_feature
LOCATION: (1130881)
OTHER INFORMATION: n equals a, t,
OTHER INFORMATION: n equals a, t, NAME/KEY: misc_feature LOCATION: (1602912)..(1602912) OTHER INFORMATION: n equals a, t, NAME/KEY: misc_feature LOCATION: (1603734)..(1603734) OTHER INFORMATION: n equals a, t, NAME/KEY: miso_feature
LOCATION: (1313224).(1313224)
OTHER INFORMATION: nequals a, t,
NAME/KEY: miso_feature
LOCATION: (1349473).(1349473)
OTHER INFORMATION: nequals a, t,
NAME/KEY: miso_feature
LOCATION: (1349491).(1349491)
OTHER INFORMATION: nequals a, t,
NAME/KEY: miso_feature
NAME/KEY: miso_feature NAME/KEY: misc feature LOCATION: (855539)..(855539) OTHER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (1310988)..(1310988) OTHER INFORMATION: n equals a, NAME/KEY: misc_feature_ LOCATION: (1569020)..(1569020) OTHER INFORMATION: n equals a, OTHER INFORMATION: n equals a, LOCATION: (1470091)..(1470091) OTHER INFORMATION: n equals a, LOCATION: (682442)...(682442)
OTHER INFORMATION: n equals a,
NAME/KEY: misc. feature
LOCATION: (713652)...(713652)
OTHER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (1637998)..(1637998) LOCATION: (674435)..(674435) OTHER INFORMATION: n equals NAME/KEY: misc_feature

318 TATTTAAAGTGGTTGTTTATGATTCTAATTTATACAAAGATATTAAGGCCCTGT 377 Query Match
7.4%; Score 34.4; DB 4; Length 1664976;
Best Local Similarity 54.8%; Pred. No. 74;
Matches 68; Conservative 0; Mismatches 56; Indels 0; (

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Sequence 1, Application US/08545528D

Patent No. 6537773

GENERAL INFORMATION:

APPLICANT: Fraser et al.

TITLE OF INVENTION: Uncleotide Sequence of the Mycoplasma Genitalium Genome, Fragment

Patent No. 6537773

TITLE OF INVENTION: Thereof, and Uses Thereof

PILE REFERENCE: PB193P1

CURRENT APPLICATION NUMBER: US/08/545,528D

CURRENT FILING DATE: 1995-10-19

PRIOR FILING DATE: 1995-06-07

PRIOR FILING DATE: 1995-06-07

PRIOR FILING DATE: 1995-06-07

PRIOR FILING DATE: 1995-06-07

SOFTWARE: PATENT NUMBER: US 08/473,545

NUMBER OF SEQ ID NOS: 1

SEQ ID NO 1

LENGTH: 580073
389857 TTTTTAACTGAGGGTATAATGACAATAACTCAAATGATAAGTGAGATTTTAATGCACAAT 389798
                                                                                                       377708 TIGGIGAGAGIGGITATIAITIAGGITITIGIAGIACAGITITITICAAATIGIAACCCCCTT 377649
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7.3%; Score 34.2; DB 4; Length 580073;
Best Local Similarity 52.4%; Pred. No. 49;
Matches 75; Conservative 0; Mismatches 68; Indels 0;
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EARLIER APPLICATION NUMBER: 60/056,170

EARLIER APPLICATION NUMBER: 60/056,170

EARLIER FILING DATE: 1997-08-19

NUMBER OF SEQ ID NOS: 14

SOFTWARE: PATENTIN Ver. 2.0

SEQ ID NO: LENGTH: 300
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Patent No. 6280938
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CRCANISM: Homo sapiens
US-09-135-994-3
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US-08-545-528D-1/c
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Length 300;

DB 3;

7.3%; Score 34;

Query Match

Search completed: May 25, 2004, 17:19:51 Job time: 101 secs

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2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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Maximum DB seq length: 200000000
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                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Ryan, James W.
APPLICANT: Ryan, James W.
APPLICANT: Sprinkle, Terry Joe Curtis
APPLICANT: Venema, Richard C.
TITLE OF INVENTION: Human Aminopeptidase P Gene
FILE REFREENCE: MCG103
CURRENT APPLICATION NUMBER: US/09/146,053A
CURRENT FILING DATE: 1998-09-02
EARLIER APPLICATION NUMBER: 60/057,854
EARLIER APPLICATION NUMBER: 60/057,854
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
ALIGNMENTS
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; Sequence 31, Application US/08863639A
; Sequence 31, Application US/08863639A
; Patent No. 598118S
; GENERAL INFORMATION:
APPLICANT: Matson, Robert S.
; APPLICANT: Rampal, Jang B.
; APPLICANT: Rampal, Jang B.
                                                                                                        Sequence 4, Application US/09146053A Patent No. 6399349
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Matches 467; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
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LENGTH: 50000
                                                                                     US-09-146-053-4/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 5.4%; Score 25; DB 2; Length 36; Best Local Similarity 100.0%; Pred. No. 0.0046; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 197
CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
                                                                                                                                                                                       ZIP: 91101
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage
COMPUTER: IBM compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: Corel WordPerfect 8 version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/863,639A
FILING DATE: May 26, 1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
TITLE OF INVENTION: OLIGONUCLEOTIDE REPEAT ARRAYS
                                                                ADDRESSEE: Sheldon & Mak
STREET: 225 South Lake Avenue, 9th Floor
CITY: Pasadena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/091,952A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Detera-Wadleigh, Sevilla D. Gershon, Elliot S. Badner, Judith A. Goldin, Lynn R. Berrettini, Wade H. Yoshikawa, Takeo Sanders, Alan R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53 CGCTGCTGCTGCTGCTGCTGCT 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: Other nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15, Application US/09091952A Patent No. 6458532 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY AGENT INFORMATION:
NAME: JOSEPH E. Wheth
REGISTRATION NUMBER: 20,532
REFERENCE/DOCKET NUMBER: 11855
TELEPHONE: (626) 796-4000
TELEPHONE: (626) 795-6321
INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
LENGTH: 36 base pairs
                       NUMBER OF SEQUENCES: 9:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
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SEQUENCE DESCRIPTION: SEQ ID NO: 14: US-09-091-952A-14
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FILING DATE: 19-Apr-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: repeat region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 3
SOFTWARE: WordPerfect 6.1/Windows
                                                                                                                                                                                                                                                                                                                                                 LENGTH: 94 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: 37...66
OTHER INFORMATION:
                                          PRIOR APPLICATION DATA:
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Best Local Similarity 100.
Matches 25; Conservative
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Matches 25; Conserv
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US-09-253-691-3/c
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LENGTH: 397
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Gershon, Elliot S.
Badner, Judith A.
Goldith A.
Goldith A.
Berrettini, Wade H.
Yoshikawa, Takeo
Sanders, Alan R.
Esterling, Lisa E.
TITLE OF INVENTION: Chromosomal Markers and Diagnostic
Tests for Manic-Depressive Illness
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 5.4%; Score 25; DB 4; Length 91; Best Local Similarity 100.0%; Pred. No. 0.0047; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LL STREET: Two Embarcadero Center, Eighth Floor CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATINE SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                   NAME: Smith, Timothy L.
REGISTRATION NUMBER: 35,367
REFERENCE/DOCKET NUMBER: 015280-297100US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/091,952A
                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/029,278
FILING DATE: 28-0CT-1996
APPLICATION NUMBER: PCT/US97/19381
FILING DATE: 28-0CT-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence
SEQUENCE DESCRIPTION: SEQ ID NO: 15:
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                           CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: repeat_region LOCATION: 37...63
      FILING DATE: 19-Apr-1999
                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                         LENGTH: 91 base pairs
                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                         TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
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US-09-091-952A-14
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Patent No. 6124100
GRNERAL INFORMATION:
GRNERAL INFORMATION:
TITLE OF INVENTION: Diagnostic Method and Kit for Neuropsychiatric Diseases
TITLE OF INVENTION: Using Trinuclectide Repeats Sequence
FILE REFERENCE: 1942/36
CURRENT FILING DATE: 1999-02-22
EARLIER PELICATION NUMBER: KR 98-6,278
EARLIER PILING DATE: 1996-02-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: -
LOCATION: 1...94
OTHER INFORMATION: Clone 22 allele 1 polymorphic marker
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100.0%; Pred. No. 0.0049;
ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.4%; Score 25; DB 4; Length 94;
100.0%; Pred. No. 0.0047;
ive 0; Mismatches 0; Indels
APPLICATION NUMBER: US 60/029,278
PILING DATE: 28-0CT-1996
APPLICATION NUMBER: PCT/US97/19381
FILING DATE: 28-0CT-1997
ATTORNEY/AGENT INFORMATION:
NAME: Smith, Timothy L.
REGISTRATION NUMBER: 35,367
REFERENCE/DOCKET NUMBER: 015280-297100US
TELEPHONE: (415) 576-0200
TELEPHONE: (415) 576-0300
TELERA: <Unknown.
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Gaps
                                                                                                                                                                                                                                                                                                                           CITY: Arlington
STATE: Virginia
COUNTRY: US
ZIP: WA 22201-4714
ZIP: WA 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/402,923A
FILING DATE: 14-Feb-2001
PRIOR APPLICATION NUMBER: PCT/GB98/01102
FILING DATE: 15-APR-1998
APPLICATION NUMBER: US 60/048,740
FILING DATE: 15-APR-1997
ATTORNEY/AGENT INFORMATION:
NAME: J. SAGOÉF
REGISTRATION NUMBER: 36,663
REGISTRATION NUMBER: 36,663
REFERENCE/DOCKET NUMBER: 620-81
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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STREET: 1100 No. 6555654th Glebe Road, Eighth Floor
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Pred. No. 0.0049;
Pred. no. no. 0; Indels
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US-09-621-976-91/c

Sequence 91, Application US/09621976

Patent No. 6639063

GENERAL INFORMATION:

APPLICANT: Dumas Milne Edwards, J.B.

APPLICANT: Glordano, J.Y.

TITLE OF INVENTION: ESTS and Encoded Human Proteins.

FILE REPRENCE: GENGET.054PR2

CURRENT APPLICATION NUMBER: US/09/621,976

CURRENT FILING DATE: 2000-07-21

NUMBER OF SEQ ID NOS: 19335

SOFTWARE: Patent.pm

SEQ ID NO 91

LENGTH: 570

TYPE: DAM

ORGANISM: Homo sapiens
Hey, Patricia
Kawaguchi, Yoshihiko
Merriman, Tony R
Metzker, Michael L
TITLE OF INVENTION: No. 6555654el LDL-Receptor
NUMBER OF SEQUENCES: 455
CORRESPONDENCES: ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQUENCE DESCRIPTION: SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80 cácrácrácrácrácrácrácrácrácr 104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 432 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (703)816-4100 INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0%; P:
Matches 25; Conservative 0;
                                                                                                                                                                                                                                                                                                                CITY: Arlington
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NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-402-923A-5
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COMPUTER READABLE FORM:
MEDIUW TYPE: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: PLOSPY MISS
COFTWARE: PATENTIN Release #1.0, Version #1.25 (BPO)
CURRENT APPLICATION DATA:
PILING DATE: 15-APR-1998
CLASSIFFICATION: 435
PRIOR APPLICATION: A35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUURESSEE: Nixon and Vanderhye
STREET: 1100 No. 6545137th Glebe Road, Eighth Floor
CITY: Arlington
STATE: Virginia
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100.0%; Pred. No. 0.0049;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hey, Patricia,
APPLICANT: Kawaguchi, Yoshihiko
APPLICANT: Kawaguchi, Yoshihiko
APPLICANT: Metzker, Michael L
TITLE OF INVENTION: No. 6545137el Receptor
NUMBER OF SEQUENCES: 455
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80 cecrecrecrecrecrecrecrecret 104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/048,740 FILING DATE: 05-UUN-1997 ATTORNEY/AGENT INFORMATION: NAME: B.J.Sadoff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 36,663
REFERENCE/DOCKET NUMBER: 620-35
TELECOMMUNICATION INFORMATION:
TELEFONE: (703)816-4100
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caskey, Charles T
Cox, Roger D
Gerhold, David
Hammond, Holly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09402923A; Patent No. 6555654; GENERAL INFORMATION:
                                                                                      Sequence 5, Application US/09060299
Patent No. 6545137
                                                                                                                                                                                           Todd, John A
Hess, John W
Caskey, Charles T
Cox, Roger D
Gerhold, David
Hammond, Holly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Todd, John A
Hess, John W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
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TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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Matches 25; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: linear
US-09-060-299-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Virginia
: US
                                                                                                                                                               GENERAL INFORMATION:
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                                                          US-09-060-299-5
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Gaps
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Sequence 1, Application US/08531927B

Patent No. 5840491

TITLE OF INVENTION:
PATENT INVENTION:
DIABORIES OF SEQUENCE Encoding the Machado-Joseph
TITLE OF INVENTION:
DIABORIES OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
STATE: Massachusetts
CONTRY: USA

CONPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IHM PC compatible
COMPUTER: IHM PC compatible
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                                                           Query Match 5.4%; Score 25; DB 4; Length 841; Best Local Similarity 100.0%; Pred. No. 0.005; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATIONS STRIEM: RC-LOOS MB-LOOS
SOCTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/531,927B
FILING DATE: 21-SEP-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: UP H6-251600
FILING DATE: 21-SEP-1994
ATTORNEY AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/OCKET NUMBER: ATH95-01A
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-661-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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; Sequence 12, Application US/09041886
; Patent No. 6215872
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Bredesen, Dale E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1776 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 1776 base par
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36..1115
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LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
FEATURE:
US-09-566-921-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-531-927B-1
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Sequence 136, Application US/09566921

Patent No. 6682886

GENERAL INFORMATION:

APPLICANT: Loring, Jeanne F.,

APPLICANT: Loring, Jeanne F.,

APPLICANT: Loring, Jeanne F.,

TITLE OF INVENTION: GENES EXPRESSED IN ALZHEIMER'S DISEASE

FILE REFERENCE: PA-0024 US

CURRENT APPLICATION NUMBER: US/09/566,921

CURRENT APPLICATION NUMBER: US/09/566,921

CURRENT FILING DATE: 2000-05-05

NUMBER OF SEQ ID NOS: 138

SOFTWARE: PERL PROGRAM

SEQ ID NO 136

LENGTH: 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.4%; Score 25; DB 4; Length 575;
100.0%; Pred. No. 0.0049;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                    Query Match 5.4%; Score 25; DB 4; Length 570; Best Local Similarity 100.0%; Pred. No. 0.0049; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-621-976-2968/C

Sequence 2968, Application US/09621976

Fatent No. 6639063

GENERAL INFORMATION:

APPLICANT: Dumas Milne Edwards, J.B.

APPLICANT: JODETT, S.

APPLICANT: Glordano, J.Y.

TITLE OF INVENTION: ESTS and Bncoded Human Proteins.

FILE REFERENCE: GENSET.054PR2

CURRENT APPLICATION NUMBER: US/09/621,976

CURRENT FILING DATE: 2000-07-21

NUMBER OF SEQ ID NOS: 19335

SOFTWARE: Patent.pm
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NAME/KEY: misc feature
NOTHER INFORMATION: Incyte ID No. 6682888 993585.1
NAME/KEY: unsure
LOCATION: 610-611
OTHER INFORMATION: a, t, c, g, or other
           LOCATION: 355..570
INDAME/KEY: sig. peptide
LOCATION: 355..564
COTHER INFORMATION: Von Heijne matrix
OTHER INFORMATION: score 7.3000019073486
COTHER INFORMATION: seq YFLISILPLFTFR/GA
US-09-621-976-91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                458 GCTGCTGCTGCTGCTGCTGCTT 434
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.(
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION: 116..286
US-09-621-976~2968
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US-09-566-921-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: CDS
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LENGTH: 575
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Sequence 5, Application US/09398496

Fatent No. 613424

Fatent No. 613424

FAPLICANT: Gearing, David P.

APPLICANT: Gearing, David P.

TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

TITLE OF INVENTION: AND USES THEREFOR

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 25; DB 3;
Pred. No. 0.0051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 5.4%; Score 25; DB Best Local Similarity 100.0%; Pred. No. 0.0 Matches 25; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 07334/022001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
TELEFAX: 617-542-8906
TELEX:
                                                                                                                                                         07334/022001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: MA
COUNTRY: US
ZIP: 0.210-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: DOS
SOFTWARE: FSSESSO VERSION 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/398,496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77
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225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/753,007
FILING DATE: 19-NOV-1996
APPLICATION NUMBER: 08/699,591
FILING DATE: 19-AUG-1996
ATTORNEY/AGENT INFORMATION:
NAME: FASSE, J. Peter
REGISTRATION NUMBER: 32,983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53 cecrecrecrecrecrecrecrecr
                                            08/699,591
              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/699,59
FILING DATE: 19-AUG-1996
ATTORNEY/AGENT INFORMATION:
NAME: Fasse, J. Peter
REGISTRATION NUMBER: 32,983
REFERENCE/DOCKET NUMBER: 0733-TELECOMMUNICATION INFORMATION:
TELERPHONE: 617-542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Coding Sequence LOCATION: 664...1883
CHER INFORMATION:
US-08-753-0078-5
                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS: LENGTH: 1884 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: cDNA
FEATURE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 225 E
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APPLICANT: Rabizadeh, Sharroz
TITLE OF INVENTION: Proapoptotic Peptides, Dependence
TITLE OF INVENTION: Proapoptotic Peptides, Dependence
TITLE OF INVENTION: Polypeptides and Methods of Use
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell & Flores Lip
STREET: 4370 La Jolla Village Drive, Suite 700
CITY: San Diego
STATE: California
COUNTRY: United States
ZIP: 92122
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/08753007A

Patent No. 6074841

GENERALI INFORMATION:
APPLICANT: Gearing, David P.
APPLICANT: Busfield, Samantha J.
TITLE OF INVENTION: DON-1 GENE THEREFOR
INVENTION: AND USES THEREFOR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESSS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
PPLICATION NUMBER: US/09/041,886
FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUBER: 31,815
REFERENCE/DOCKET NUMBER: 9-LJ 2626
TELECOMMUNICATION INFORMATION:
TELEFAK: (619) 535-9001
TELEFAK: (619) 535-9001
TELEFAK: (619) 535-901
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 1776 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/753,007A
FILING DATE: 19-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53 CGCTGCTGCTGCTGCTGCTGCT 77
                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: US
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
36..1116
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STREET: ZALL
TWY: Boston
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US
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; LOCATION:
US-09-041-886-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Colige, Alain
APPLICANT: Lapiere, Charles M.
APPLICANT: Lapiere, Charles M.
APPLICANT: Prockop, Darwin J.
TITLE OF INVENTION: RECOMBERANT N-PROTEINASE,
TITLE OF INVENTION: AND THE PRODUCTION, METHODS AND USES THEREOF
NUMBER OF SEQUENCES: 1,
ADDRESSEE: Pennie & Edmonds, LLP
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                                                                                                                                                                                                                                                                        Length 1884;
                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                   Query Match 5.4%; Score 25; DB 3; I
Best Local Similarity 100.0%; Pred. No. 0.0051;
Matches 25; Conservative 0; Mismatches 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: Windows SOFTWARE: PSAUSO, OF WINDOWS Version 2.0b CURRENT APPLICATION NUMBER: US/09/491,522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8389-0060-999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSEE: Pennie & Edmonds, LLP
1155 Avenue of the Americas
New York
                                                                                                                                                                                                                                                                                                                                                      77
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/886,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-491-522-6; Sequence 6, Application US/09491522; Patent No. 6428998; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Abrams, Samuel B
REGISTRATION NUMBER: 30,605
REFERENCE/DOCKET NUMBER: 83
TELECOMMUNICATION INFORMATION
TELEPHONE: 650-493-4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 650-493-5556
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 2023 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                               NAME/KEY: Coding Sequence LOCATION: 664...1883
CTHER INFORMATION:
US-09-398-496-5
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MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 1884 base pairs
                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                         MOLECULE TYPE: CDNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
Matches 25; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TOPOLOGY: linear
US-09-491-522-6
                                                                                                          linear
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                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
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53 CGCTGCTGCTGCTGCTGCTGCTT 77

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NEGOUAL 1,

NEGOUAL 1,

Sequence 7, Application US/08261822A,

Sequence 7, Application US/08261822A,

Patent NO. 5650553;

GENERAL INFORMATION:

APPLICANT: Ecker, Joseph R. et al.

TITLE OF INVENTION: Plant Genes for Sensitivity to Ethylene

TITLE OF INVENTION: and Pathogens

NUMBER OF SEQUENCES: 82

CORRESPONDENCE ADDRESS:

ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 5650553ris

STREET: One Liberty Place, 46th floor

CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                           Sequence 13, Application US/09675305

Patent No. 6441153

General INFORMATION:

APPLICANT: Donoho, Gregory

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Pandrowicz, Brian

APPLICANT: Sands, Arthur T.

TITLE OF INVENTION: No. 6441153e1 Human Carboxypeptidases and

TITLE OF INVENTION: Polynucleotides Encoding the Same

FILE REFERENCE: LEX-0047-USA

CURRENT FILING DATE: 2000-09-29

PRIOR PAPLICATION NUMBER: US 60/156,685

WINDERS OF THE NOOP OF THE NOOP OF THE NUMBER: US 60/156,685

WINDERS OF THE NOOP OF THE NUMBER: US 60/156,685
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5.4%; Score 25; DB 4; Length 2128;
Best Local Similarity 100.0%; Pred. No. 0.0051;
Matches 25; Conservative 0; Mismatches 0; Indels
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COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/261,822A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13
LENGTH: 2128
125 decrecrecrecrecrecrecrecr 149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54 GCTGCTGCTGCTGCTGCTGCTT 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 GCTGCTGCTGCTGCTGCTGCTT 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 2234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: homo sapiens
US-09-675-305-13
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                                                                             RESULT 16
US-09-675-305-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
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Patent No. 6428998
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Sequence 7, Application PC/TUS9507744A

Sequence 7, Application PC/TUS9507744A

Sequence 7, Application PC/TUS9507744A

THE OF INVENTION: Plant Genes for Sensitivity to Ethylene
TITLE OF INVENTION: and Pathogens
NUMBER OF SEQUENCES: 82

CORRESPONDENCES: 82

CORRESPONDENCE ADDRESS:
ADDRESSE: Woodcock, Washburn, Kurtz, Mackiewicz & Norris STREET: One Liberty Place, 46th floor
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.4%; Score 25; DB 5; Length 2234; 00.0%; Pred. No. 0.0051;
                                                                                                                                                       Length 2234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                             0; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TEMP PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/07744A
FILING DATE: 15-UUNE-1995
                                                                                                                                                   5.4%; Score 25; DB 1; 100.0%; Pred. No. 0.0051; ative 0; Mismatches 0
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/261,822
FILING DATE: June 17, 1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Beardell, Lori Y.
REGISTRATION NUMBER: 34,293
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3439
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 2234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0
Matches 25; Conservative
                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 25; Conservative
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  TYPE: nucleic acid
STRANDEDNESS: single
                                  linear
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MOLECULE TYPE: CD
                                      TOPOLOGY: line
MOLECULE TYPE: HYPOTHETICAL: N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                              , ANTI-SENSE: NO
US-08-261-822A-7
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                                                                                                                                                                                                                                                                                                                                   RESULT 18
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RESULT 19 US-09-491-522-2 ; Sequence 2, Application US/09491522

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GENERAL INFORMATION:
APPLICANT: Colige, Alain
APPLICANT: Colige, Alain
APPLICANT: Lapiere, Charles M.
APPLICANT: Prockop, Darwin J.
TILLE OF INVENTION: RECOMBINANT N-PROTEINASE,
TITLE OF INVENTION: AND THE PRODUCTION, METHODS AND USES THEREOF
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 25; DB 4; Lengtu ...; Pred. No. 0.0051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: Windows
SOFTWARE: Fast-SEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/491,522
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100.0%; Pred. No. c...
0; Mismatches
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TITLE OF INVENTION: USES OF MAB-21
TITLE OF INVENTION: USES OF MAB-21; CORRESPONDENCE ADDRESS:
ADDRESSEE Cooper & Dunham LLP
STREET: 1185 Avenue of the Americas CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125 cécrécrécrécrécrécrecrecrit 149
                                                                                                                                                           E: Pennie & Edmonds, LLP
1155 Avenue of the Americas
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                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/886,333
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Abrams, Samuel B
REGISTRATION NUMBER: 30,605
REFERENCE/DOCKET NUMBER: 838
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-493-4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELERAX: 650-493-5556
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: FEM Comparible
COMPUTER: HEM Comparible
OPERATING SYSTEM: Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 2450 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
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                                                                                                                                                                                                          New York
                                                                                                                                                                                                                                                     USA
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                                                                                                                                                                    ADDRESSEE:
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                                                                                                                                                                                                                                                     COUNTRY:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
Sequence 10, Application US/09521511C
Patent No. 6555358
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53 CGCTGCTGCTGCTGCTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 2, Application US/09060299; Patent No. 6545137; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Todd, John A
APPLICANT: Hess, John W
APPLICANT: Caskey, Charles T
                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cox, Roger D
Gerhold, David
Hammond, Holly
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: PKG
US-09-521-511C-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1100 No. CITY: Arlington STATE: Virginia COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 23
US-09-060-299-2
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLBIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P2548PIC1
CURRENT APPLICATION NUMBER: U5/09/866,028
CURRENT FILING DATE: 2001-05-25
Prior application data removed - consult PALM or file wrapper
NUMBER OF SEQ ID NOS: 120
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                             5.4%; Score 25; DB 3; Length 2770;
100.0%; Pred. No. 0.0051;
rive 0; Mismatches 0; Indels
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                                                     CLASS FIGURIAN: 435
ATTORNEY, AGENT INFORMATION:
NAME: Chan, Albert Wai-Kit
REGISTRATION NUMBER: 36,479
REFERENCE/DOCKET NUMBER: 50752-A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 391-0525
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 2770 base pairs
TYPE: nucleic acid
STRANDEDNES; double
                                                                                                                                                                                                                                                                                                                                                                                                                                                              54 GCTGCTGCTGCTGCTGCTGCTT 78
    APPLICATION NUMBER: US/09/008,697A FILING DATE: January 19, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53 CGCTGCTGCTGCTGCTGCTGCTGCT
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Patent No. 6642360
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara, Napoleone
Filvaroff, Ellen
Gerritsen, Mary
Godowski, Paul
Grimaldi, Christopher
                                                                                                                                                                                                                                                                                                                                                                                   Query Match 5.4%
Best Local Similarity 100.(
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin
APPLICANT: Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin
Hillan, Kenneth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roy, Margaret
Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Napier, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 25; Conserv
                          FILING DATE: Ja
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LENGTH: 3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-866-028-14
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APPLICANT:
APPLICANT:
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APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
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RESULT 22 US-09-521-511C-10/c

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APPLICANT: Gurnett, Anne
APPLICANT: Gurnett, Anne
APPLICANT: Liberator, Paul A.
APPLICANT: Liberator, Paul A.
APPLICANT: Donaid, Robert
APPLICANT: Schmatz, Dennis
APPLICANT: Rattray, Sandra J.
TITLE OF INVENTION: CYCLIC GMD DEPENDENT PROTEIN KINASE AS A
TITLE OF INVENTION: CYCLIC GMD DEPENDENT PROTEIN KINASE AS A
TITLE OF INVENTION: CYCLIC GMD DEPENDENT PROTEIN KINASE AS A
TITLE OF INVENTION: CHEMOTHERAPEUTIC TARGET FOR ANTIPROTOZOAL AGENTS
FILE REFERENCE: 2036.2
CURRENT PAPLICATION NUMBER: 60/129,058
PRIOR APPLICATION NUMBER: 60/129,058
PRIOR APPLICATION NUMBER: 60/129,058
PRIOR APPLICATION NUMBER: 60/129,058
PRIOR APPLICATION NUMBER: 60/129,058
SOFTWARE: FREESEQ for Windows Version 4.0
SSEQ ID NO 10
SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 5.4%; Score 25; DB 4; Length 426 Best Local Similarity 100.0%; Pred. No. 0.0052; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Partial P.C.-DOS/MS-DOS
SUFTWARE: Parentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/060,299
FILLING DATE: 15-APR-1998
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Nixon and Vanderhye
1100 No. 6545137th Glebe Road, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Hey, Patricia
APPLICANT: Kawaguchi, Yoshihiko
APPLICANT: Merziman, Tony R
APPLICANT: Metzker, Michael L
TITLE OF INVENTION: No. 6545137el Receptor
CORRESPONDENCES: 455
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUN-1997
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APPLICATION NUMBER: US 60/043,553
FILING DATE: 15-APR-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/048,740
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                                                                                                                      5.4%; Score 25; DB 4; Length 4843;
100.0%; Pred. No. 0.0052;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUNESSEE: Nixon and Vanderhye
STREET: 1100 No. 6545137th Glebe Road, Eighth Floor
CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version #1.25 (EPO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.4%; Score 25; DB 4; I
100.0%; Pred. No. 0.0052;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Metzker, Michael L
TITLE OF INVENTION: No. 6545137el Receptor
NUMBER OF SEQUENCES: 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTAY: US
COUNTAY: US
COUNTAY: US
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OFTWARE: PATENTIN RELease #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION WUMBER: US/09/060,299
FILING DATE: 15-APR-1998
CLASSIFICATION: 4355
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 60/043,553
FILING DATE: 15-APR-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/046,740
FILING DATE: US-UNV-1997
ATTORREY/AGENT INFORMATION:
NAME: B.J.Sadoff
REGISTRATION NUMBER: 36,663
REGISTRATION NUMBER: 36,663
REGISTRATION NUMBER: 36,663
TYPE: nucleic acid
STRANDENESS: single
TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53 CGCTGCTGCTGCTGCTGCTGCT 77
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Kawaguchi, Yoshihiko
Merriman, Tony R
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caskey, Charles T
Cox, Roger D
Gerhold, David
Hammond, Holly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (703)816-4100
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (703)816-4091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 5098 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                            Query Match 5.4%
Best Local Similarity 100.0
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 5098 base pair
                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Todd, John A
APPLICANT: Hess, John W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
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Best Local Similarity
Matches 25; Conserva
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: US
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US-09-402-923A-2
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US-09-060-299-1
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ZIP: VA 22201-4714

COMPUTER RADABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTER: PC-DOS/MS-DOS

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/402,923A

FILING DATE: 14-Feb-2001

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Nixon and Vanderhye
STREET: 1100 No. 6555654th Glebe Road, Eighth Floor
CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                  5.4%; Score 25; DB 4; Length 4843; 100.0%; Pred. No. 0.0052; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metzker, Michael L
TITLE OF INVENTION: No. 6555654el LDL-Receptor
NUMBER OF SEQUENCES: 455
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FRILING DATE: 15-APR-1998
FILING DATE: 15-APR-1998
APPLICATION NUMBER: US 60/043,553
FILING DATE: 15-APR-1997
APPLICATION NUMBER: US 60/048,740
FILING DATE: 05-JUN-1997
ATTORNEY, AGENT INFORMATION:
NAME: B.J.Sadoff
                                                                                                                                                                                                                                                                                                                                                                                                         11
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Cox, Roger D
Gerhold, David
Hammond, Holly
Hey, Patricia
Kawaguchi, Yoshihiko
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REFERENCE/DOCKET NUMBER: 62
                            NAME: B.J.Sadoff
REGISTRATION NUMBER: 36,663
REFERENCE/DOCKET NUMBER: 620-35
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)816-4091
TELEFAX: (703)816-4100
                                                                                                                                                                                                                                                                                                                                                                                                           53 CGCTGCTGCTGCTGCTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                32 decrecrecrecrecrecrecrecre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/09402923A
Patent No. 6555654
GENERAL INFORMATION:
APPLICANT: Todd, John A
Hess, John W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (703) 610
mar. RFAX: (703) 816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                            LENGTH: 4843 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                 TELEFAX: (703)816-4100
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                25; Conservative
                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 25; Conserv
                                                                                                                                                                                                                                                         ;
TOPOLOGY:
US-09-060-299-2
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US-09-402-923A-2
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Sequence 6, Application US/09091952A Patent No. 6458532 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/886,333
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 197
                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM Compatible OPERATING SYSTEM: Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: CA
COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 10036-2811
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
US-09-491-522-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 28
US-09-091-952A-6
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSER: Nixon and Vanderhye
STREET: 1100 No. 6555654th Glebe Road, Eighth Floor
CITY: Arlington
STREET: Virginia
STATE: Virginia
COUNTRY: US
ZIP: VA 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: Floppy disk
SOFTWARE: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.4%; Score 25; DB 4; Length 5098; 100.0%; Pred. No. 0.0052; tive 0; Mismatches 0; Indels
                                                                                                                                                                                   APPLICANT: Todd, John A

APPLICANT: Todd, John W

Caskey, Charles T

Cox, Roger D

Gerhold, David

Hammond, Holly

Hey, Particia

Kavaguchi, Yoshihiko

Merziman, Tony R

Merzker, Michael L

TITLE OF INVENTION: No. 6555654el LDL-Receptor

NUMBER OF SEQUENCES: 455

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/GB98/01102
FILING DATE: 15-APR-1998
APPLICATION NUMBER: US 60/043,553
FILING DATE: 15-APR-1997
APPLICATION NUMBER: US 60/048,740
FILING DATE: 05-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: B.J.Sadoff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/402,923A FILING DATE: 14-Feb-2001 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 36,663
REFERENCE/DOCKET NUMBER: 620-81
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4091
TELEFAX: (703) 816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80 cecrecrecrecrecrecrecrecrecr
80 CGCTGCTGCTGCTGCTGCTGCT 104
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                                                                                                                          ; Sequence 1, Application US/09402923A
; Patent No. 6555654
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 1, Application US/09491522; Parent No. 6428998; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 5098 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
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Best Local Similarity 100...
Best Local Similarity 100...
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                                                                                       RESULT 26
US-09-402-923A-1
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US-09-491-522-1
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Gaps
APPLICANT: Colige, Alain
APPLICANT: Lapiere, Charles M.
APPLICANT: Lapiere, Charles M.
APPLICANT: PROCKED, Darwin J.
TITLE OF INVENTION: RECOMBINANT N-PROTEINASE,
TITLE OF INVENTION: AND THE PRODUCTION, METHODS AND USES THEREOF
NUMBER OF SEQUENCES: 1
ADDRESSEE: Pennie & Edmonds, LLP
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
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APPLICANT: Detera-Wadleigh, Sevilla D.
Badner, Judith A.
Goldin, Lynn R.
Berrettini, Wade H.
Yoshikawa, Takeo
Sanders, Alan R.
Esterling, Licomosomal Markers and Diagnostic
TITLE OF INVENTION: Chromosomal Markers and Diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 5.4%; Score 25; DB 4; Length 669 Best Local Similarity 100.0%; Pred. No. 0.0052; Matches 25; Conservative 0; Mismatches 0; Indels
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ADDRESSE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, Eighth Floor CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: Windows SOFTWARE: FastSEQ for Windows Version 2.0b CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/491,522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 30,605
REGISTRATION NUMBER: 30,605
REFERENCE/DOCKET NUMBER: 8389-0060-999
TELECOMOUNICATION INFORMATION:
TELEPHONE: 650-493-556
TELEFAX: 650-493-556
TELEFAX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 6692 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125 CGCTGCTGCTGCTGCTGCTGCT 149
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Sequence 11, Application US/08068747

Patent No. 5695933

GENERAL INPORMATION:
APPLICANT: Schalling, Martin
APPLICANT: Housman, Thomas J.
APPLICANT: Housman, David E.
APPLICANT: OF INVENTION: Direct Determination of Expanded
TITLE OF INVENTION: Nucleotide Repeats in the Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1%; Score 24; DB 1; Length 30; 100.0%; Pred. No. 0.014; ive 0; Mismatches 0; Indels
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
STATE: Massachusett
COUNTRY: USA
ZIP: USA
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: US/08/068,747
FILING DATE: Z8-MAY-1993
CLASSIFICATION: 435
                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC compatible
OPERATUR SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 28-MAY-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: MIT-6141
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-9540
INFORMATION FOR SEQ ID NO: 6:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54 GCTGCTGCTGCTGCTGCTGCT 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "Synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,227
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CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 30 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: sing
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Matches 24; Conserva
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COUNTRY: U
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US-08-068-747-11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: 5595...5685
OTHER INFORMATION: amplified region for genotyping
SEQUENCE DESCRIPTION: SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.4%; Score 25; DB 4; Length 8065; 100.0%; Pred. No. 0.0053; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: 452...505
OTHER INFORMATION: alternatively spliced portion
                       COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
CORFWARE: FastSEG for Windows Version 2.0
SOFTWARE: Variable Software Soft
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/08068747
Patent No. 5655933
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Schalling, Martin
APPLICANT: Hudson, Thomas J.
APPLICANT: Hudson, David E.
TITLE OF INVENTION: Direct Determination of Expanded
TITLE OF INVENTION: Nucleotide Repeats in the Human C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C. STREET: Two Militia Drive
STRET: Lexington
STATE: Massachusett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: 116...1036
OTHER INFORMATION: Clone 22 coding region
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LOCATION: 1...8065
OTHER INFORMATION: Clone 22
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MOLECULE TYPE: DNA (genomic)
FRATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0
Matches 25, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
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US-08-068-747-6/c
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TYPE: DNA ORGANISM: Homo sapiens
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 33
US-09-684-843A-4/c
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                                                                                                                                                                               SEQ ID NO 4
LENGTH: 30
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                                                                                                                                            5.1%; Score 24; DB 1; Length 30; 100.0%; Pred. No. 0.014; tive 0; Mismatches 0; Indels
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MDDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage COMPUTER: IBM compatible COMPUTER: IBM compatible COMPUTER: DISKETTEN Windows 95 SOFTWARE: Corel WordPerfect 8 version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/863,639A FILING DATE: May 28, 1997

CLASSIFICATION NUMBER: 20,532

ATTORNEY/AGENT INFORMATION:

NAME: JOSEPH E. Muech REFERENCE/DOCKET NUMBER: 20,532

REFERENCE/DOCKET NUMBER: 11859-1

TELLEPHONE: (626) 796-4400

TELLEPHONE: (626) 795-4401

TELLEPHONE: (626) 795-421

INFORMATION FOR SEQ ID NO: 30:

SEQUENCE CHARACTERISTICS:

'PMCTH: 30 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Matson, Robert S.
APPLICANT: Cassain, Peter J.
APPLICANT: Rampal, Jang B.
APPLICANT: Caskey, C. T.
TITLE OF INVENTION: OLIGONUCLECTIDE REPEAT ARRAYS
NUMBER OF SEQUENCES: 95
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Prec. ...
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225 South Lake Avenue, 9th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54 GCTGCTGCTGCTGCTGCTGCT 77
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                     TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "Synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: Other nucleic acid
                                                                                                                                                                                                                                                                                                                                                 Sequence 30, Application US/08863639A Patent No. 5981185 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28 gergergergergerger
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                                                                                                                                                                                     24; Conservative
     30 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
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Best Local Similarity
Matches 24; Conserv
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                                                                                                                                                                                                                                                                                                                    RESULT 31
US-08-863-639A-30/c
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US-09-135-994-4/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-863-639A-30
                                                                                                              US-08-068-747-11
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5.1%; Score 24; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 0.014;
Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                   5.1%; Score 24; DB 3; Length 30; 100.0%; Pred. No. 0.014; tive 0; Mismatches 0; Indels
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; Sequence 14, Application US/08570155
; Patent No. 5962332
; General Information:
    APPLICANT: Singer, Robert H.
    APPLICANT: Taneja, Krishan L.
    TITLE OF INVENTION: DETECTION OF TRINUCLEOTIDE REPEATS
    TITLE OF INVENTION: BY IN SITU HYBRIDIZATION
    NUMBER OF SEQUENCES: 17
    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/09684843A
Sequence 4, Application US/09684843A
Patent No. 6514755
GENERAL INFORMATION:
TITLE OF INVENTION: SCA7 GENE AND METHODS OF USE
FILE REFERENCE: Regents of the University of Minneso CURRENT APPLICATION NUMBER: US/09/684,843A
CURRENT APPLICATION NUMBER: 00/056,170
PRIOR APPLICATION NUMBER: 00/056,170
PRIOR FILING DATE: 1999-08-19
PRIOR FILING DATE: 1999-08-18
NUMBER OF SEQ D NOS: 14
APPLICANT: Ranum et al.
TITLE OF INVENTION: SCA7 GENE AND METHODS OF USE
FILE REFERENCE: University of Minnesota
CURRENT APPLICATION NUMBER: US/09/135,994A
CURRENT FILING DATE: 1998-08-18
EARLIER APPLICATION NUMBER: 60/056,170
EARLIER APPLICATION NUMBER: 60/056,170
BARLIER FILING DATE: 1997-08-19
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.0
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Best Local Similarity 100.0
Matches 24; Conservative
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SEQ ID NO 4
LENGTH: 30
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100.0%; Pred. No. 0.014;
tive 0; Mismatches 0; Indels
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COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage

COMPUTER: Diskette, 3.50 inch, 1.44 Mb storage

COMPUTER: Mindows 95

SOFTWARE: Corel WordPerfect 8 version

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/863,639A

FILING DATE: May 28, 1997

CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 36
US-08-863-639A-29
Sequence 29, Application US/08863639A
Sequence 29, Application US/08863639A
Parent No. 5981185
GENERAL INFORMATION:
APPLICANT: Coassin, Peter J.
APPLICANT: Caskey, C. T.
TITLE OF INVENTION: OLIGONUCLEOTIDE REPEAT ARRAYS
NUMBER OF SEQUENCES: 95
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheldon & Mak
STREET: 225 South Lab.
                                                                                                                                                                                                                                                                                                                                                                                       Query Match 5.1%; Score 24; DB Best Local Similarity 100.0%; Pred. No. 0.0 Matches 24; Conservative 0; Mismatches
                                                                                        06353/010WO1
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NAME: JOSEPH E. Mueth
REGISTRATION NUMBER: 20,532
REFERENCE/DOCKET NUMBER: 11859-1
TELECOMMUNICATION INFORMATION:
ATTORNEY/AGENT INFORMALL.

NAME: Creason, Gary L.

REGISTRATION NUMBER: 34,310
REFERENCE/DOCKET NUMBER: 06353//
TELECOMMUNICATION INFORMATION:
TELEFAX: (617) 542-5070
TELEFAX: (617) 542-8906

INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Other nucleic acid
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TELEFAX: (626) 796-400C
TELEFAX: (626) 795-6321
INFORMATION FOR SEQ ID NO: 29:
SEQUENCE CHARACTERISTICS:
LENGTH: 33 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLATY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 24; Conservative
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MOLECULE TYPE:
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Best Local Similarity 100.0%; Pred. No. 0.014;
Matches 24; Conservative 0; Mismatches 0; Indels
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Sequence 14, Application PC/TUS9502861

GENERAL INFORMATION:
APPLICANT: Singer, Robert H.
TITLE OF INVENTION: DETECTION OF TRINUCLEOTIDE
TITLE OF INVENTION: REPEATS
TITLE OF INVENTION: BY IN SITU HYBRIDIZATION
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: FISH & RICHARDSON P.C.
STREET: 225 Franklin Street
                                                                                                               SOFTWARE: Patentin Release #1.0, Version CUSFTWARE: #1.30B
CUSFRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/570,155
                                                                                                                                                                                               FILING DATE:
CLASSIFICATION 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/399,499
FILING DATE: 07 March 1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/214,823
FILING DATE: 17 March 1994
ATTONEX/ASHUT INFORMATION:
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 06353/011001
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRANCE (617) 542-5070
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ZIP: 02110-2804
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0,
SOFTWARE: PatentIn Release #1.0,
SOFTWARE: #1.30B
CURRENT APPLICATION NUMBER: PCT/US95/02861
FILING DATE: 08 MARCh 1995
CLASSIFICATION:
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                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICATION NUMBER: 08/214,823
FILING DATE: 17 March 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 200154
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 31 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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RESULT 39

US-09-043-303-14/C

Sequence 14, Application US/09043303

Patent No. 6251889

GENERAL INFORMATION:

APPLICANT: SANPEI, Kazujiro

TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and

TITLE OF INVENTION: Primers Therefor

TITLE OF INVENTION: Primers Therefor

TITLE OF INVENTION: WIMBER: US/09/043,303

CURRENT APPLICATION NUMBER: PCT/JP96/01999

EARLIER APPLICATION NUMBER: PCT/JP96/01999

EARLIER FILING DATE: 1998-05-16

NUMBER OF SEQ ID NOS: 17

SOOFWARE: PatentIn Ver. 2.0
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                                                                                                                                        Length 53;
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100.0%; Pred. No. 0.015;
tive 0; Mismatches 0; Indels
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                                                                                                                                          Score 24; DB 4;
Pred. No. 0.014;
                                                          FRATURE:
CTHER INFORMATION: synthetic oligonucleotide
US-09-136-080E-50
                                                                                                                                                                              8; Mismatches
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                                                                                                                                      5.18;
  LENGTH: 53
TYPE: RNA
ORGANISM: Artificial Sequence
                                                                                                                                      Query Match
Best Local Similarity 66.74
Matches 16; Conservative
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Best Local Similarity 100.(
Matches 24; Conservative
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; ORGANISM: Homo sapiens
US-09-043-303-13
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US-09-043-303-13/c
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APPLICANT: Schalling, Martin
APPLICANT: Hudson, Thomas J.
APPLICANT: Housman, David E.
TITLE OF INVENTION: Direct Determination of Expanded
TITLE OF INVENTION: Nucleotide Repeats in the Human Genome
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.1%; Score 24; DB 1; Length 51; larity 100.0%; Pred. No. 0.014; Conservative 0; Mismatches 0; Indels
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J. Sequence 50, Application US/09136080E

J. Sequence 50, Application US/09136080E

J. SEPTICANT: RILEY, Timothy A.

APPLICANT: Brown, Bob D.

APPLICANT: Arnold, Lyle J.

TITLE OF INVENTION: COMBINATORIAL ANTISENSE LIBRARY

FILE REFERENCE: OASEIO.003A

CURRENT APPLICATION NUMBER: US/09/136,080E

CURRENT FILING DATE: 1998-08-18

NUMBER OF SEQ ID NOS: 54

SSCFIWARR: FaetSEQ for Windows Version 3.0

SEQ ID NO 50
                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C. STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/068,747
FILING DATE: 28-MAY-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTATION NUMBER: 32,227
REPERENCE/DOCKET NUMBER: MIT-6141
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
77
                                     56
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
54 GCTGCTGCTGCTGCTGCTGCT
                                   3 dergergergergerger
                                                                                                                                  Sequence 1, Application US/08068747 Patent No. 5695933
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TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
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CITY: Lexington
STATE: Massachusett
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Best Local Similarity
Thes 24; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                       USA
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TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                               US-08-068-747-1
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TITLE OF INVENTION. PARTOJINO
TITLE OF INVENTION: PARTOJINO
TITLE OF INVENTION: PARTON THEFE
TITLE OF INVENTION: PARTON THEFE
TITLE OF INVENTION: PARTON THEFE
CURRENT APPLICATION WINBER: US/09/043,303
CURRENT FILING DATE: 1986-07-18
MUMBER OF SEQ ID NOS: 17
SOFTWARE: PARTON NOS: 17
SOFTWARE: PARTON NOS: 17
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US-09-205-995-75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Orr, Harry T.
APPLICANT: Ranum, Laura P.W.
APPLICANT: Chung, Ming-yi
APPLICANT: Chung, Ming-yi
APPLICANT: CSgbbi, Huda Y.
TITLE OF INVENTION: Gene Sequence for Spinocerebellar Ataxia
Patent No. 5741645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 24; DB 3; Length 78;
Pred. No. 0.015;
0; Mismatches 0; Indels
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Sequence 75, Application US/09205995
Patent No. 6368B55
GENERAL INFORMATION:
APPLICANT: Windham
APPLICANT: Qiu, Gang
APPLICANT: Aumphreys, Robert
TITLE OF INVENTION: CANCER CELL VACCINE
FILE REFERENCE: U.S. Application 09/205,995;
CURRENT PAPLICATION NUMBER: US/09/205,995;
CURRENT FILING DATE: 1998-03-09
PRIOR APPLICATION NUMBER: 09/036,746
PRIOR FILING DATE: 1998-03-09
PRIOR FILING DATE: 1998-03-09
PRIOR RELING DATE: 1998-03-09
SPRIOR FILING DATE: 1998-03-09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 5.1%; Score 24; DB Best Local Similarity 100.0%; Pred. No. 0.0 Best Actions 24; Conservative 0; Mismatches
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; Sequence 6, Application US/08469802B
Patent No. 5741645
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
CORGANISM: Homo sapiens
US-09-043-303-12
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                                                                                                                                                                                                                                                                      Sequence 10, Application US/09043303

| Sequence 10, Application US/09043303
| Patent No. 6251589
| GENERAL INFORMATION:
| APPLICANT: TSULI, Shoji
| APPLICANT: SANPEI, Shoji
| TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and
| TITLE OF INVENTION: Primers Therefor
| TITLE OF INVENTION: Primers Therefor
| TITLE OF INVENTION Primers Therefor
| TITLE OF INVENTION PRIMER: US/09/043,303
| CURRENT APPLICATION NUMBER: US/09/043,303
| CURRENT FILING DATE: 1998-05-18
| EARLIER PILING DATE: 1998-05-18
| NUMBER OF SEQ ID NOS: 17
| SOFTWARE: Patentin Ver. 2.0
| SEQ ID NO 10
| LANGTH: 75
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US-09-043-303-11/c

Sequence 11, Application US/09043303

Sequence 11, Application US/09043303

Sequence 11, Application US/09043303

GENERAL INCORMATION:

APPLICANT: SENDEL Kazujiro

APPLICANT: SANPEL Kazujiro

TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and

TITLE OF INVENTION: Primers Therefor

FILE REFERENCE: 076-0241P

CURRENT APPLICATION NUMBER: US/09/043,303

CURRENT FILING DATE: 1998-05-18

EARLIER APPLICATION NUMBER: PCT/UP96/01999

RARLIER FILING DATE: 1996-07-18

NUMBER OF SEQ ID NOS: 17

SOFTWARE: Patentin Ver. 2.0
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100.0%; Pred. No. 0.015;
cive 0; Mismatches 0; Indels
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                                                                                                           11
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; Sequence 12, Application US/09043303
; Patent No. 6251589
; GENERAL INFORMATION;
APPLICANT: TSUJI, Shoji
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
CRGANISM: Homo sapiens
US-09-043-303-10
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US-09-043-303-11
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Best Local Similarity
Matches 24; Conserv
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STATE: D. C.
COUNTRY: U.S.A.
ZIE: 20005-3918
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/332,766A
FILING DATE: 01-NOV-1994
CIASSIFICATION: 435
PRIOR APPLICATION 435
PRIOR APPLICATION ATA:
APPLICATION NUMBER: GB 9326052.9
FILING DATE: 21-DEC-1993
NAME: BIRD, DORAL INFORMATION:
NAME: BIRD, DORAL SORAL SELECOMOUNICATION NUMBER: 25,323
REFERENCE/DOCKET NUMBER: 25,323
REFERENCE/DOCKET NUMBER: 21000
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION NUMBER: 21000
                                                                                                                                                                                                                                                                                                                                                                                         Query Match 5.1%; Score 24; DB 2; Le Best Local Similarity 100.0%; Pred. No. 0.015; Matches 24; Conservative 0; Mismatches 0;
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Sequence 13, Application US/08332766A

Patent No. 5845647

Patent No. 5845647

Patent No. 5845647

APPLICANT: JEFFREYS, Alec J.

APPLICANT: ARMOUN, John

ITILE OF INVENTION: SIMPLE TANDEM REPEATS

NUMBER OF SEQUENCES: 125

CORRESPONDENCE ADDRESS:

ADDRESSE: CUSHMAN DARBY & CUSHMAN, L.L.P.

STREET: 1100 New YORK AVenue, N.W.
                                                        110.00030120
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NAME: McCormack, Myra H.
REGISTRATION NUMBER: 36,602
REFERENCE/DOCKET NUMBER: 110.0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-305-1217
TELEPHONE: 612-305-1228
INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:
LENGTH: 154 base pairs
TYPE: nucleic acid
STRANDEDMESS: single
TOPOLOGY: linear
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TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 13
SEQUENCE CHARACTERISTICS:
LENGTH: 160 base pairs
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STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DNA
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APPLICANT: Ranum, Laura P.W.
APPLICANT: Chung, Ming P.W.
APPLICANT: Cognbi, Huda Y.
TITLE OF INVENTION: Gene Sequence for Spinocerebellar Ataxia
Patent No. 5834183
TITLE OF INVENTION: Type I and Method for Diagnosis
NUMBER OF SEQUENCES: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSE: Mueting, Raasch, Gebhardt & Schwappach, P.A.
STREET: P.O. Box 581415
CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 154;
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100.0%; Pred. No. 0.015;
tive 0; Mismatches 0; Indels
                                                                                                                                                              COUNTRY: ....
ZIP: 55401
ZIP: 55401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/469,802B
FILING DATE: 06-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Wheeling, Ann M.
REGISTRATION NUMBER: 33,977
REFERENCE/DOCKET NUMBER: 110.00030101
TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
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TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
TELECOMPUNICATION INFORMATION:
                     NUMBER OF SEQUENCES: 47
CORRESPONDENCE ADDRESS:
ADDRESSEE: Mueting, Raasch, Gebhardt & Schwappach,
STREET: 119 No. 5741645th Fourth Street, Suite 203
STATE: MN
IITLE OF INVENTION: Type 1 and Method for Diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATE:
APPLICATION NUMBER: US/08/267,803B
FILING DATE: 28-JUN-1994
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COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/M8-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application US/08267803B
Patent No. 584183
GENERAL INFORMATION:
APPLICANT: Orr, Harry T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 612-305-1225
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 154 base pairs TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
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INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 168 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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612-305-1228
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612-305-1225
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EDNESS: single
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Best Local Similarity
                                                                                                                                              , MOLECULE TYPE: DNA
US-08-469-802B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
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                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 50
US-08-267-803B-4/C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-267-803B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: M
COUNTRY:
ZIP: 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX:
TELEFAX:
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APPLICANT: TSUJI, Shoji
APPLICANT: TSUJI, Shoji
APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and
TITLE OF INVENTION: Primers Therefor
FILE REFERENCE: 0760-0241P
CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1996-05-18
EARLIER APPLICATION NUMBER: PCT/JP96/01999
EARLIER APPLICATION NUMBER: PCT/JP96/01999
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 17
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Patent No. 5741645
GENERAL INFORMATION:
APPLICANT: Cri, Harry T.
APPLICANT: Chung, Ming-yi
APPLICANT: Cophbi, Huda Y.
TITLE OF INVENTION: Gene Sequence for Spinocerebellar Ataxia
Patent No. 5741645
ITILE OF INVENTION: Type I and Method for Diagnosis
NUMBER OF SEQUENCES: 47
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Description of Artificial Sequence:Probe US-09-043-303-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.1%; Score 24; DB 3; Length 165; 100.0%; Pred. No. 0.015; ative 0; Mismatches 0; Indels
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STREET: 119 No. 5741645th Fourth Street, Suite 203
CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCENARE: Patentin Release #1.0, Version #1.25
SCURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/469,802B
FILING DATE: OG-UUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 110.00030101
TELECOMMUNICATION INFORMATION:
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                                          105 écrécrécrécrécrécrécrecr 82
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMPUTER: IBM PC compatible
OPERATING SYSTEM: PC_DOS/MS-DOS
    54 GCTGCTGCTGCTGCTGCTGCT
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                                                                                                                                              Sequence 17, Application US/09043303
Patent No. 6251589
GENERAL INFORMATION:
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NAME: Mueting, Ann M.
REGISTRATION NUMBER: 33,5
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nes 24; Conservative
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                                                                                                                                 US-09-043-303-17/c
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                                                                                                                                                                                                                                                                Sequence 4, Application US/08267803B
Patent No. 5834183
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ranum, Laura P.W.
APPLICANT: Chung, Ming-yi
APPLICANT: Chung, Ming-yi
APPLICANT: Coghbi, Huda Y.
TITLE OF INVENTION: Gene Sequence for Spinocerebellar Ataxia
TITLE OF INVENTION: Type 1 and Method for Diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1%; Score 24; DB 2; Length 168; 100.0%; Pred. No. 0.015; 1. Indels iive 0; Mismatches 0; Indels
         5.1%; Score 24; DB 1; Length 168; 100.0%; Pred. No. 0.015; ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gebhardt & Schwappach, P.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 55458-1415
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: APERICATION DATA:
APPLICATION NUMBER: US/08/267,803B
FILING DATE: 28-UN-1994
CLASSIFICATION: 435
ATTORNEX/AGENT INFORMATION:
NAME: MCCORMACK, MYZH H.
REGISTRATION NUMBER: 36,602
REFERENCE/DOCKET NUMBER: 310.00030120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db -
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                                                                                                           54 GCIGCIGCIGCIGCIGCIGCIGCT
Query Match
Best Local Similarity 100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSE: Mueting, Raasch,
STREET: P.O. Box 581415
CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION
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Search completed: May 25, 2004, 19:20:24 Job time: 94 secs

May 25, 2004, 16:30:32 ; Search time 3345 Seconds (without alignments) 6051.180 Million cell updates/sec 1 caatgitigcctatccacct......taataaacagitaaaagcig 467 1846324 GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd. Total number of hits satisfying chosen parameters: 3470272 seqs, 21671516995 residues Post-processing: Listing first 100 summaries OM nucleic - nucleic search, using sw model OLIGO NUC Gapop_60.0 , Gapext 60.0 em_vi:*
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em_htg_inv:*
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em_htg_other:* em_htgo_other:* SEQ29-NA-TRUNCATED em_htg_pln:* em_htg_rod:* em_htg_mam:* em_htg_vrt:* Minimum DB seq length: 0
Maximum DB seq length: 200000000 gb ba:*
gb htg:*
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gb pl:*
gb y:*
gb vi:*
gb vi:*
em fun:*
em fun:*
em ow:*
em ow:* em_ro:* em_sts:* em_un:* em pat:* em ph:* em pl:* 10 Title: Perfect score: Sequence: Scoring table: Word size : Database :

Searched:

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is the number of results predicted by chance to have a Pred. No.

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	1 00	53 Sequenci	557 Homo sap	104	704 Sequen	7 0 2	84 Sequence	Primer	AK001855 Homo sapi	Sequenc	Sequenc	Primer	Homo s	AC121349 Mus muscu AC131317 Mus muscu	Oryz	ເນman SI	ABUZBIB3 Oryza sat	Sequenc	cerevisi	AC017472 Drosophil	Oryza sa	AC103357 Mus muscu aC138056 Medicado	AC010921 Drosophil	AL954848 Zebrafish	Drosophi Medicado	AC121924 Mus muscu	Mus muscu	AC036642 Genomic s AC114715 Rattus no	Mus mus	Mus mus Monge	AL929249 Mouse DNA AL845432 Mouse DNA	2,	Mouse	Mus mus	AC131846 Rattus no	Rattus	Mus mus	Rattus	AC128474 Rattus no	AC131577 Mus muscu	AE003504 Drosophil	AF187994 Dipodomys	AY333192 Anopheles	A1333202 A10Diretes	Anopheles	Anophel	Anophel	Anophel	Anophel	Fucace	Mus
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5.6 1022 5.6 1048 1156 1048 1156 1048 1056 1058 1058 1058 1058 1058 1058 1058 1058	37891 2 ACCIDENT SERVING SERVI	5.6 110000 2 5.6 110000 2 5.6 110000 2 5.6 110000 2 5.6 1103887 10 5.6 114135 2	Z E E	Secreted and transmembrane polypeptides the same transmembrane polypeptides the same to 116318-A 29 08-MAR-2001; Genetich, Inc. (US) Location/Qualifiers 1. 494 /organism="Homo sapiens" /ml_type="unassigned DNA" /db_xref="taxon:9606"	ttch 467; Score 467; DB 467; Conservative 0; Mismatches 1 CAATGTTTGCCTATCCACCTCCCCAAGCCCTTTA 1 CAATGTTTGCCTATCCACCTCCCCCAAGCCCTTTA 1 CAATGTTTGCCTATCCACCTCCCCCAAGCCCTTTA
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000 00000000000000000000000000000000	н	RESULT 1 AX092298 LOCUS DEFINATION ACCESSION VERSTON KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS	TITLE JOURNAL FEATURES SOURCE	Query Match Best Local Matches 46 Qy 1

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CTCCTGCTGCTGCTTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCCCAGAAA 120
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                                                                                                                                                                                                                                                                                                                                                          361 AGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAA 420
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Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                    181 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAAGCCCCAGCCCCGTGGGGAAGGG
                                                                                                                                                                   181 TGTCTCCTGCCTCATCGGCCTGCCAGACCTGCAGCCAAGCCCAAGCCCAGGGGAAGGG
                                                                                                                                                                                                               241 GAGAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGTG
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Genentech Inc. (US)
Location/Qualifiers

    .494
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

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Homo sapiens
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KEYWORDS
SOURCE
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I (bases 1 to 495)

Clark, H.F., Gurney, A.L., Abaya, E., Baker, K., Baldwin, D., Brush, J.,
Chen, J., Chow, B., Chui, C., Crowley, C., Currell, B., Deuel, B.,
Dowd, P., Eaton, D., Foster, J., Grimaldi, C., Gu, Q., Hass, P.E.,
Heldens, S., Huang, A., Kim, H.S., Klimowski, L., Jin, Y., Johnson, S.,
Lee, J., Liewis, L., Liao, D., Mark, M., Robbie, E., Sanchez, C.,
Schoenfeld, J., Sehagiri, S., Simmons, L., Singh, J., Smith, V.,
Stinson, J., Vagts, A., Vandlen, R., Watanabe, C., Wieand, D., Woods, K.,
Kie, M.H., Yansura, D., Yi, S., Yu, G., Yuan, J., Zhang, M., Zhang, Z.,
Goddard, A., Wood, W.I. and Godowski, P.
The Secreted Protein Discovery Initiative (SPDI), a Large-Scale
Biffort to Identify Novel Human Secreted and Transmembrane Proteins:
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 03-OCT-2003 complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MLLLTLLLLLLKGSCLEWGLVGAQKVSSATDAPIRDWAFFPP
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                                                                                                                                                                                                                                420
                                                                                                                                                  GGCTAGGGGGCCTGCCTTATTAAAGTGGTTGTTTATGATTCTTATACTAATTTATACAA 360
                                                                                                                                                                                    GGCTAGGGGGGCTGCCTTATTTAAGTGGTTGTTTATGATTCTTATACTAATTTATACAA 360
                                                                                                                                                                                                                                                              AGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGTTTGTAA 420
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CA 94080, USA
                          TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAGCCCCGTGGGGAAGGG
                                                                        GAGAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAAGAGGGTAGTGGGTG
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                                                                                                                                                                                                                                                                                                      AGALTGITCIGIDAAATAIGICITTAIAAAACAGITAAAAGCIG 467
                                                                                                                                                                                                                                                                                                                                      AGATTGTTCTGTGTAAATATGTCTTTATAATAAACAGTTAAAAGCTG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                AX358657 495 bp mRNA linear
Homo sapiens clone DNA56862 APELIN (UNQ471) mRNA,
AX358657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (01-AUG-2003) Department of
Inc., 1 DNA Way, South San Francisco,
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Genome Res. 13 (10), 2265-2270 (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="AAQ89020.1"
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/clone="DNA56862"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /locus_tag="UNQ471"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AY358657.1 GI:37182435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FLI_CDNA.
Homo sapiens (human)
Homo sapiens
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SOURCE
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AY358657
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Length 495;

Score 467; DB 9; : Pred. No. 2.3e-258;

100.0%;

Query Match Best Local Similarity

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 2673)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausherg, R.L., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.K., Bhat, N.K., Hopkins, R.F., Jordan, H., Moozer, T. Marx, S.I., Wang, J., Haieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., McKernan, K.J., Malek, J.A., Gunarane, P.H., Richards, S.W., McKernan, K.J., Malek, J.A., Gunarane, P.H., Richards, S.W., Hallon, D.K., Malek, J.A., Gunarane, P.H., Richards, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, B., Ketteman, M., Madan, A., Youchan, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schevchenko, Y., Butterfield, Y.S., Kazywinsh, M. J., Shalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
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Homo sapiens apelin, mRNA (cDNA clone MGC:31846 IMAGE:4586949),
complete cds.
                                                             1 CAATGITTGCCTATCCACCTCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTG
                                                                                                                              1 CAAIGITTGCCTATCCACCTCCCCCAAGCCCCTTTACCTATGCTGCTGCTAACGCTGCTG
                                                                                                                                                                                                                                                         61 crecrecrecrecrecritaaasecrearecriceseresesacresiceresereseaaa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCCAGCCCAAGCCCAGCCCCGTGGGGAAGGG
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          Gaps
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
22388257
      .;
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      Indels
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   Mismatches
   0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
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467; Conservative
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PUBMED
REFERENCE
AUTHORS
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10696. .10805,12706. .12841,18582. .18692,19339. .19504,
19759. .19994,27786. .27809,30444. .30560,31621. .31705,
32328. .33455,33287. .33398,33588. .33712)
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10656. .10805,12706. .12841,18582. .18692,19339. .19504,
19759. .19994,30444. .30560,31621. .31705,32328. .32455,
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LEKSLLGWPPLDEGASERPLOVPKEIMILVDHIHEKYRÄHDSDEDFGYPGMQEELQQIID
CLDYSIPETIPGSNSTSVABALLIFERALPERYICYELYQRCLDSAYDFRICRQVISQL
PRCHRNVFRYLMAFILRELLKFSEYNSVNANMIATLFTSLLLRPPPNLMARQTSSDROR
                 match: cDNAs: Em:M88162 Em:U57627 Em:M74161 Em:AF040094 match: ESTs: Em:AA368192 Em:AA704671 Em:AA515789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Alu1b repeat: matches 1. .302 of consensus" 6639. .6933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1586. .1847
/hote="MIR repeat: matches 2. .262 of consensus"
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product=#445471.1.2 (variant 2)"
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The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, EMBL; Sww., SWISSROT; Tr., TREMBL; Wp., WORMPEP; Information http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome X, constructed by the Sanger Centre Chromosome X Mapping futbr://www.sanger.ac.uk/HGP/ChxX

RP3-454M7 is from the library RPCI-3 constructed by the group of http://www.chori.org/bacpac/home.htm

WETOR: POYPACE
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3922. .4093,4621. .4735,5626. .5942,6041. .6228,9214. .9325,
10696. .10805,12706. .12841,18582. .18692,19339. .19504,
19759. .19994,30444. .30560,31621. .31705,32328. .32455,
33287. .33398 .35598)
                                                                                PRI 05-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      During sequence assembly data is compared from overlapping clones.
                                                                                                                                                                                                                                                                                                                                   Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. 1 (bases 1 to 151152)
Pavitt, R.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (05-JUN-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Jun 2, 1998 this sequence version replaced gi:2969945.
                                                                      HS454M7 linear PRI 05-UUN-20
Human DNA sequence from clone RP3-454M7 on chromosome Xq25-26.3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="dJ454M7.1.1 (Lowe Oculocerebrorenal Syndrome)"
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/mol_type="genomic DNA"
/db_xref="RZPD:RPCIP704M07454"
/db_xref="taxon:9606"
/chromosome="X"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
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/clone_lib="RPCI-3"
767. .35998
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                                                                                                                                                                     AL022162.1 GI:3171881
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HS454M7/c
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COMMENT

QY 181 TGTCTCCTGCCTCATCGGCCTGCCATGACCTGCAGCCCAGCCCCGTGGGGAAGGG 240 Db 89538 TGTCTCCTGCCTCATCGGCCTGCAGCCCAGCCCGTGGGGAAGGG 89479 QY 241 GAGAAAGTGGGGATGGCTAGAAAGCTGGAGCAAGCCAGCC	618 ata; b, I. Openor, I. Au. II. Au. I. Au. I. Au. I. Au. I.	JOINTHAGE 194502,144348. 1447421,149203. 152849. 152849. 152995,155710. 155811,156897. 151993. 152849. 152995,155710. 155811,156897. 151993. 157849. 152995,155710. 158890,156714. 159823. 157368. 160536. 160613,16176. 1619714. 159823. 160536. 160613,16176. 167248. 167348. 16736. 168012,172845. 172934,173533. 176791) 167936. 168012,172845. 172934,173533. 176791) 167936. 168012,172845. 172934,173533. 176791) 167936. 184189. 1444453 1444453 1444453 1444453 1444454. 1444454. 144429. 1444454. 1444454. 1444454. 1444454. 1444454. 15842,151837. 151923. 150445. 152995,155710. 155811,156987. 157668, 157392. 157849. 157871. 158490,155714. 159823, 160536. 160613,161726. 161797,164422. 164482. 160613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164422. 161613,161726. 161797,164
repeat_region /note="MDR33 repeat: matches 1323 of consensus"	/ note = / note = / note = / note = / note = / note = / note =	Query Match 100.0%; Score 467; DB 9; Length 151152; Best Local Similarity 100.0%; Pred. No. 2.7e-258; Aatches 467; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy 1 CAATGTTTGCCTATCGACTCCCCCCAAGCCCTTTACCTATGCTGCTGCTGCTG 60 Db 89718 CAATGTTTGCTATCGACTCCCCCCAAGCCCTTTACCTATGCTGCTGCTGCTG 89539 Qy 61 CTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG

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DDSRSLTRIRPVHLPGPSLD"
                                                                                                                                                       PAT 17-DEC-2003
                                                                                                                                                                                                                                                                                                                                         Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primers for syntheselsing full-length cDNA and their use Patent: BP 1074617-A 12289 07-FEB-2001; Research Association for Biotechnology (JP)
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                 421 AGATIGITCIGIGIAAAIAIGICITITAIAAIAACAGITAAAAGCIG
                                                                                                                                                    linear
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Sequence 12589 from Patent BP1074617,
AX877684
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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                                                                                                         RESULT 8
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                                                                                                                                                                                              LSIDTWESYDLALQGSNRQLVSITTNLVDLVWGSERPPVPNOPIYALQEAFTGSTWQE
KVSGVRSQMQKHQKVPTAVLLSALEETAWLFNLRASDIPYNPFFYSYTLLTDSSIRLF
ANKSRFSSETLSYLNSSCTGPMCVQIEDYSQVRDSIQAYSLGDVRIWIGTSYTWYGIY
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                                                                                                                                        /translation≈"MARAHWGCCPWLVLLCACAWGHTKPVDLGGQDVRNCSTNPPYLP
                                                                                                                                                         VTVVNTTMSLTALRQQMQTQNLSAYIIPGTDAHMNEYIGQHDERRAWITGFTGSAGTA
VYTMKKAAVWIDSRYWIQAERQMDCNWELHKEVGTTPIVTWLLTEIPAGGRVGFDPFL
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161778. .161780
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/note="divalent metal ligand; metal-binding site"
175728. .176791
/gene="XNPEP2"
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/note="divalent metal ligand; metal-binding site"
164435. .164437
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(6473. .166475
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    .166518,167248. .167307, .172934,173533. .173727)
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join(167307,167936..167937)
/gene="XNBFD2"
/nocte="divalent metal ligand; metal-binding
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'protein id="AAG28480.1"
'db_xref="GI:11066157"
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Similarity 100.0%; Pred. No. 2.8e-258;
57; Conservative 0; Mismatches 0;
.. .165823,166414.
.. .168012,172845.
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/gene="XNPEP2"
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Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) MEDO human cDNA sequencing project supported by Ministry of International Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology; cDNA library construction, 5'- & 3'-end one pass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Centerect.) and Department of Virology, Institute of Medical Science,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /trānslation="MSATWCSPEGOGMGQGPGREVGGNSAASGPASPIRNPCLSEAGL
KGPPSAHPLRLCLLHRLVCFSGGLTSIQLSPRTCCSHQWAQLFSPACFPQWRAPGCSL
DDSRSLTRIRPVHLPGPSLD"
                                                                                                                                                                                        Isogai, T., Ota, T., Hayashi, K., Sugiyama, T., Otsuki, T., Suzuki, Y., Nishikawa, T., Nagai, K., Sugano, S., Takahashi-Fujii, A., Hara, H., Harae, T., Nomura, Y., Togiya, S., Komai, F., Hara, R., Takeuchi, K., Arita, M., Nabekura, T., Ishii, S., Kawai, Y., Saito, K., Yamamoto, J., Wakamatsu, A., Nakamura, Y., Nagahari, K., Masuho, Y. and Oshima, A.
                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (16-FEB-2000) Takao Isogai, Helix Research Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCTGCTGCTGCTGCTGCTTAAAGGCTCATGCTTGGAGTGGGGACTGGTCGGTGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="placenta"
/clone_lib="PLACE1"
/note="cloning vector: pME18SFL3"
                                                       oligo capping, fis (full insert sequence).
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6. .374 /note="unnamed protein product"
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/organism="Homo sapiens"
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/clone="PLACE1002140"
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Location/Qualifiers
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gai, T. and Otsuki, T.
                               AK001855.1 GI:7023382
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Matches 413; Conservative
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                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalla, Eutheria, Primates, Catarrhini, Hominidae, Homo.

(bases 1 to 2243)
Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishi,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primar for Synthesizing full-length cDNA and use thereof Patent: JP 2002191363-A 11634 09-JUL-2002;
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KEIICHI NAGAI, TETSUJI OTSUKI
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                                                                                                                                                                                                                                                                                                                                                                                                                  TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C C12P21/02,C12Q1/69//C12P21/08,G06F17/30,C12N15/00,C12N5/00
Primer for synthesizing full-length cDNA and use thereof FH K
Location/Qualifiers
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  Primer for synthesizing full-length cDNA and use thereof
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Location/Qualifiers
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/mol_type="genomic DNA"
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                                                                                                                                                                                                                                                                                                                                                                    09-JUL-2002
28-JUL-2000 JP 2000280990
                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
JP 2002191363-A/11634
                                         BD156791.1 GI:27862549
JP 2002191363-A/11634.
Homo sapiens (human)
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JOURNAL Patent: WO 0194629-A 3361 13-DEC-2001; Avalon Pharmaceuticals (US) FEATURES Location/Qualifiers Source /organism=Homo sapiens" /mol trace home sapiens home sap	ored. No Mismat	QY 227 CCCGTGGGGAAAGGGAGAAAGTGGGGATGGCTAAGAAAGCTGGGAGATAGGGAACAGAA 286 Db 252 CCCGTGGGGAAAGGGGAGAAAGTGGGGATGGCTAAGAAGCTGGGAGATAGGGAACAGAA 193 QY 287 GAGGGTGGTGGGCTAAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTCTTAT 346 Db 192 GAGGGTAGTGGGTGGGCTAAGGGCGCTGCCTTATTAAAGTGGTTGTTTATGATTCTTAT 346 192 GAGGGTAGTGGGTGGGCTAAGGGCGCTGCCTTATTAAAGTGGTTGTTTATGATTCTTAT 133	OY 347 ACTARTTATACAAAGATAFTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCC	12 G	AX874329/c LOCUS AX874329 AX874329 DAA LOCUS DEFINITION ASQUENCE SERVING AX874329 VERSION AX874329 USRSION AX874329.1 GI:40029100	Homo sapiens (human) M Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Verteby Mammalia; Eutheria; Primates; Catarrhini; Homir	AUTHORS Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. TITLE Primers for synthesising full-length cDNA and their use JOURNAL Patent: EP 1074617-A 9234 012-FEB-2001; Research Association for Biotechnology (JP) FRATURES SOURCE 10402 (AUTHORS)		Query Match 51.0%; Score 238; DB 6; Length 403; Best Local Similarity 99.7%; Pred. No. 7.5e-126; Matches 288; Conservative 0; Mismatches 1; Indels 0; Gaps 0; QY 179 IGHTGTCTCCTGCCTCATCGGCCTGCCTGCAGCCCAAGCCCCAGCCCCAGGGGAAG 238	2	169 TGGGCTAGGGGGCTGCCTTATTTAAAGTGGTTGTTTATGATTNTTATACTAATTTATATA
Db 2131 ATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTGTTCAATGT 2190 Qy 415 TTGTAAAGATTGTTCTGTGTAAATGTCTTTATAATAAACAGTTAAAAGCTG 467 Db 2191 TTGTAAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAAAAGCTG 2243	RESULT 11 AX332625/c LOCUS LOCUS DEFINITION Sequence 3134 from Patent W00194629. VERSION ACCESSION AX332625 GI:18123259	s (human) Metazoa, Chordata, Craniata, Vertebrata, Eutele utheria, Primates, Catarrhini, Hominidae, Homo. Augustus, M., Carter, K.C., Ebner, R., Endress, G., SOppet, D. R. and Weaver, Z.	NAL ES ource	Okidin Query Match Sest Local Similarity 100.0%; Pred. No. 1.4e-127; Matches 241; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	CAGAA CAGAA	192 GAGGGTGGGTGGGCTGGGGGGGCCTGTTTTAAAGTGGTTGTTTATGTTCTTAT 347 ACTAATTTATACAAAGATATTAAAGGCCTGTTCATTAAAGAAATTGTTCCTTAT 347 ACTAATTTATACAAAGATATTAAAGGCCTGTTCATTAAAGAAATTGTTCCTTGTT 347 ACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAAGAAATTGTTCCCTTGCCTTGTG 13. ACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTGCCCTGTG 13. ACTAATTTATACAAAGATATTAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCCTGTG 13. ACTAATTTAATACAAAGATATTAAGAAATTAAGAAATTGTTCCCTTTCCCTTGTGTTGTTTAAGAAATTGTTCCCTTTCCCTTGTTGTTTTAAGAAATTAAGAAATTAAGAAAAAAAA	407 72 467	Db 12 G 12 RESULT 12		ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; RAMMMalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. AUTHORS Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G.,	

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St. Louis MO 63108, USA
http://genome.wustl.edu/gsc
mailto:est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Sequencing Center
Department of Genetics
Washington University
                                                                                                                          AF086248.1 GI:3483593
                                                                                                                                            FLI CDNA.
Homo sapiens (human)
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Waterston, R.
                                                                                                                                                                                 Homo sapiens
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                            RESULT 15
HUMZD38F03
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(Dases 1 to 403)
Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishi,S., Sujiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primer for synthesizing full-length cDNA and use thereof Patent:

(PR 2002191363-A 9234 09-JUL-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OSS HOMO SEQUENCE (Human)
PN JP 2002191363-A/9234
PD 09-UL-2002
PP 24-UL-2000 JP 2000280990
PT TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU
PI SALTO,
PI JUNICHI YAMAMOTO, SHIZUKO ISHII, TOMOYASU SUGIYAMA, AI WAKAMATSU, PI KEIICHI NAGAI, TETSUJI OTSUKI
PC CI2NIS/09, CO7KI4/47, C07KI6/18, C12NI/15, C12NI/19, C12NI/21, C12NIS/ PC
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359 AAAGATATTAAAGGCCCTGTTCATTAAGAAATTGTTCCCTTCCCTGTGTTCAATGTTTGT 418
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169 TGGGCTAGGGGGCCTCCTTATTTAAAGTGGTTGTTTATGATTNTTATACTAATTTATAC 110
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Primer for synthesizing full-length cDNA and use thereof.
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                                                                         419 AAAGAITGITGIGIAAAIAIGICITIAIAAIAAAAGGITAAAAGCIG
                                                                                                   49 AAAGATTGTTCTGTGTAAATATGTCTTTATAATAACAGTTAAAAGCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HELIX RESEARCH INSTITUTE
                                                                                                                                                                                                                                                                    BD154391.1 GI:27860149
JP 2002191363-A/9234.
Homo sapiens (human)
Homo sapiens
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Best Local Similarity
Matches 288; Conserv:
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PRI 29-AUG-1998
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Submitted (24-AUG-1998) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
SUBMITTED BY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              attempt has been made to verify whether this corresponds to the full-length of the original mRNA from which it was derived. We have tried to obtain double-stranded, or double chemistry sequence across the entire clone, but potentially, there are areas in the sequence where this level of coverage was not achieved. Nevertheless, we are confident of the accuracy of this sequence as all regions of low quality, as defined by PHRAP (P. Green, in preparation), were visually inspected and edited accordingly. The consensus quality values for this sequence have been submitted
                                                                                                                                                                                                                                                 Eukaryogicus
Bukaryogicus
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
I. (Dases I to 598)
Woessmer, J., Tan, F., Marra, M., Kucaba, T., Yandell, M., Martin, J.,
Marth, G., Bowles, L., Wylie, T., Bowers, Y., Steptoe, M., Thaising, B.,
Geisel, S., Allen, M., Underwood, K., Chappell, J., Person, B.,
Gibbons, M., Harvey, N., Pape, D., Chamberlain, A., Morales, R.,
Schurk, R., Ritter, E., Komp, S., Swaller, T., Behymer, K., Hillier, L.,
Wilson, R. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         400
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598 bp mRNA linear
Homo sapiens full length insert cDNA clone ZD38F03.
AF086248
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/clone_lib="Soares_fetal_heart_NbHH19W"
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Pred. No. 1.3e-61;
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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misc_feature
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                                                       ACLZ2549 202198 bp DNA linear HTG 13-MAR-2003
Mus musculus clone RP23-406024, WORKING DRAFT SEQUENCE, 9 unordered
pieces.
                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 202198)
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All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                     Birren, B., Nusbaum, C. and Lander, E. Mus musculus, clone RP23-406024
                                                                                                                                                                                       AC122549.4 GI:28933870
HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                                                                                                                     Mus musculus (house mouse)
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RESULT 16
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COMMENT

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Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: This is a 'working draft' sequence. It currently consists of 9 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                             Center project name: 123913
Center clone name: 406 0.24
Center clone name: 406 0.24
Center clone name: 406 0.24
Center clone name: 406 0.24
Sequencing vector: Plasmid; n/a; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731
Consensus quality: 199596 bases at least Q40
Consensus quality: 201632 bases at least Q20
Insert size: 180000; agarose-fp
Insert size: 201398; sum-of-contigs
Quality coverage: 10.7 in Q20 bases; sgarose-fp
Quality coverage: 9.7 in Q20 bases; sum-of-contigs
                                                              Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15814: contig of 3052 bp in length
15914: gap of 100 bp
27843: contig of 11929 bp in length
27943: gap of 100 bp
100820: contig of 72877 bp in length
100920: gap of 100 bp
175522: contig of 71602 bp in length
176522: gap of 100 bp
202198: contig of 29576 bp in length
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of 1326 bp in length
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contig of 1215 bp in length
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of 3052 bp in length
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/mol_type="genomic DNA"
/db_xref="taxxon:10090"
/clone="RP23-406024"
/clone="RP23-406024"
/clone="RP23-406024"
/clone="sesembly_fragment
clone end:SP6
vector_side:left"
                      Center code: WIBR
Web site: http://www-seg.wi.mit.edu
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/note="assembly_fragment"
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/note="assembly_fragment"
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seq29-na-truncated.olig10.rge

ORIGIN		CONMETRIES OF Many Of DOOR LEES.
	6.0%; Score 28;	Comman On Mar 1, 2005 this Sequence Version replaced 91:28412031. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
hes 2	SIMILAILLY 100.0%; Fred. NO. 0.00031; 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
	50 TAACGCTGCTGCTGCTGCTGCTT 77	Center: Whitehead institute/ Mil Center for Genome Research Center code: WIBM Web site: http://www.seq.wi mit adm
Db 104108 TAX	104108 TAACGCTGCTGCTGCTGCTGCTGCTT 104135	Contact: sequence submissions@enome.wi.mit.edu
RESULT 17		Center project name: L26954 Center clone name: 333 F 2
ACL	204171 bp DNA linear HTG 2	Sequencing vector: Plasmid; n/a; 100% of reads
pie	THE CLOSE RESTRICTED DESCRIPTION OF THE SECUENCE,	Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731
z	GI:29135646	Consensus quality: 202347 bases at least Q40 Consensus quality: 202846 bases at least Q30
SOURCE Mus m	HIG; HIGS PHASE1; HIGS DRAFI. Mus musculus (house mouse)	Consensus quality: 202986 bases at least Q20
ORGANISM Mus m	Mus musculus Eukarvota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:	Insert size: 203371; sum-of-contigs
	Sciurognathi; Muridae;	Quality coverage: 8.7 in Q20 bases; againserip Quality coverage: 8.7 in Q20 bases; sum-of-contigs
AUTHORS Birre	Birren, B., Nusbaum, C. and Lander, E. Mis misculis close DD21_33252	* NOTE: This is a 'working draft' sequence. It currently
	Unpublished (Line of the content of	
KEFERENCE 2 (D AUTHORS Birre	(bases 1 to 204171) ren.B.: Nusbaum.C.: Tander.B.: Ali.A.: Allen N. Andarson s	* arbitrary. Gaps between the contigs are represented as
Barne	a,N., Bastien,V., Bloom,T., Boguslavkiy,L., Boukhgalter,B.,	* runs of N, but the exact sizes of the gaps are unknown, * This record will be updated with the finished sequence
Cook,	camatata,u., Chang,u., Chazaro,b., Choepel,Y., Collymore,A., Cook,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S.,	* as soon as it is available and the accession number will * be preserved.
Faro, Gardo	,S., Ferreira,P., FitzGerald,M., Gage,D., Galagan,J.,	1474:
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Karat Liu.G	tas,A., Kelis,C., Landers,T., Levine,R., Lindblad-Toh,K., 3. MacLean C. Mardonald D. Maiox J. Matthons	64579: gap of 100 bp
McCar	rthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V.,	69264:
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Phunk	thang, P., Pierre, N., Raymond, C., Retta, R., Rise, C., Rogov, P.,	85551: gap of 105030: contig
komar. Smith	l, u., koy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., h, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Talamas. J.,	105130: gap of 100 bp
Tesfa	Aye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., R. Vol. Wilson B. W., V. W. W. C., C., C., C., C., C., C., C., C., C.	gap of 100 bp
	ek, L., Zimmer, A. and Zody, M.	143983:
TITLE Direc JOURNAL Submi	ot Submission Itted (20-AUG-2002) Whitehead Institute/MIT Center for Genome	202781: contig
REFERENCE 3 (b	Research, 320 Charles Street, Cambridge, MA 02141, USA 3 (bases 1 to 204171)	* 20288
AUTHORS Birre	n.B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N.,	FEALUKES LOCATION/QUALITIETS SOUTCE 1204171
Bogus	.eou.,s., Arachchi,h.m., barna,n., bastlen,v., Bloom,T., slavkiy,L., Boukhgalter,B., Camarata,J., Chang,J., Choepel,Y.,	/organism="Mus musculus" /mol type="genomic DNA"
Colly	/more,A., Cook,A., Cooke,P., Corum,B., DeArellano,K., J.S. Dodge S. Doolev K. Dorrie I. Prickson J. Earn S.	/db
Ferre	pira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S.,	
Hall,	J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C.,	misc_reature 161474 /note="assembly fragment
Kamat Lindb	., A., Karatas, A., Kells, C., Landers, T., Levine, R., Slad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C.	clone end:SP6
Macdo	onald, P., Major, J., Manning, J., Matthews, C., McCarthy, M.,	misc_feature 6157564479
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Talam Vassi	Talamas,J., Tesfaye,S., Theodore,J., Topham,K., Travers,M., Vassiliev,H., Venkataraman,V.S., Viel,R., Vo.A., Wilson,B., Wu.X.,	,
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Oryza sativa
Oryza sativa
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
Ehrhartoideae, Oryzeae, Oryza.
                         1 (bases 1 to 373)
Murray,J., Sheffield,V, Weber,J.L., Duyk,G. and Buetow,K.H.
Cooperative Human Linkage Center
Unpublished (1995)
Synonyms: GCT4G01, CHLC.GCT4G01.T10965
Contact: Dr. Jeffrey C. Murray
         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kikuchi, K., Ueguchi-Tanaka, M., Yoshida, K.T., Nagato, Y., Matsusoka, M. and Hirano, H.Y.
Molecular analysis of the NAC gene family in rice
Molecular Genet. 262 (6), 1047-1051 (2000)
20123461
10660065
                                                                                                                                                                                                                                                                                                                                                30 seconds at 94 degrees C
75 seconds at 55 degrees C
15 seconds at 72 degrees C
27
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                                                                                                                                                     The University of Iowa
Department of Pediatrics, Iowa City, IA 52242, USA
Tel: (319) 356-3508
Fax: (319) 356-3347
Email: jeff-murray@uiowa.edu
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each 1.5 pmole
each 200 uM
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PCR Profile:
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                                                                                                                                                                                                                                                                                                                                              PLN 07-FEB-2001
                                                                                                                                                                                                                                                                                                                        227 bp DNA linear PLN 07-FEB-2001
Oryza sativa microsatellite MRG5547 containing (GCT)X9, closest to
marker L825, genomic sequence.
AY023222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tao,N., Barbazuk,W.B., Liu,J., Wu,K. and Barry,G.F.
Direct Submission
Submitted (10-JAN-2001) Genomics, Monsanto, 800 North Lindbergh
Blvd., Creve (0-U-TAN-2001) Genomics generated from the Monsanto
Rice Genome Sequencing project. Please see
http://www.rice-research.org for more information. The sequence
data were produced primarily in the laboratories of Dr. Leroy Hood
at the University of Washington in Seattle.
Location/Qualifiers
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryza sativa
bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
Dases 1 to 227)
Tao,N., Barbazuk,W.B., Liu,J., Wu,K. and Barry,G.F.
Simple sequence repeats from Monsanto rice genomic sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GU9506 373 bp DNA linear STS 14-AUG-1999
human STS CHLC.GCT4G01.P10966 clone GCT4G01, sequence tagged site.
G09506
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STS; STS sequence; primer; sequence tagged site.
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                         Gaps
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                                                                                                                             6.0%; Score 28; DB 2; Length 204171; larity 100.0%; Pred. No. 0.00031; Conservative 0; Mismatches 0; Indels 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Oryza sativa"
/mol type="genomic DNA"
/db_zref="taxon:4530"
1. .227
/note="microsatellite MRG5547"
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/note="assembly_fragment"
               202882. .204171 /note="assembly_fragment
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                                                       clone_end:T7 __
vector_side:right"
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/rpt_unit="gct"
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                                                                                                                                               Similarity
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Best Local Similarity
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                 misc_feature
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Best Local Simi
Matches 28;
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ACCESSION
VERSION
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SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                      DEFINITION
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                                                                                                                                                                                                                                                                                                 RESULT 18
AY023222
LOCUS
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AUTHORS
TITLE
JOURNAL
REFERENCE
RUTHORS
TITLE
JOURNAL
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LOCUS
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'S Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Doi, K., Fujimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, M., Fujimura, T., Fukuda, S., Hanagaki, T., Hara, Hashizume, M., Fujimura, T., Fukuda, K., Hayashizaki, Y., Hayashiz, M., Hiramoto, K., Hiraoka, T., Hori, F., Hotta, I., Iida, J., Iida, Y., Ikeda, R., Imamura, K., Kanagawa, S., Katoh, H., Kawagashira, N., Kawai, J., Kawamata, M., Kikuchi, S., Kishikawa-Hirozane, T., Kishimoto, N., Kobaa, M., Kojima, K., Kojima, Y., Miura, J., Miyazahi, M., Masuda, H., Marabari, K., Marata, M., Miura, J., Miyazahi, A., Marabani, K., Murakami, K., Murata, M., Nagata, T., Nakamura, M., Namiki, T., Narikawa, R., Nikura, J., Nishi, K., Nomura, K., Osato, N., Otano, Y., Ryu, R., Saitoh, H., Sakai, C., Sakai, Shinagawa, A., Shiraki, T., Saitoh, K., Satoh, K., Shibata, K., Sujiraki, T., Saitoh, K., Shibata, K., Sujiraki, T., Saitoh, K., Satoh, K., Sujamo, S., Sujiyama, A., Suzuki, K., Tagami, M., Tagami, Takeda, Y., Tagama, A., Takahashi, F., Takahashi, F., Takahashi, T., Tamatu, A., Tayami, T., Tamatu, A., Tawana, A., Tanada, H., Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and Vochimina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FAIR Genome Sequencing & Analysis Group: Otomo, Y., Tida, Y., Rodamata, M., Kobayashi, M., Kodama, T., Kucaka, T., Kusumegi, T., Lu, M., Marada, M., Mirura, J., Marikawa, R., Nikura, J., Oka, M., Ryu, R., Sugano, S., Mizuno, K., Marikawa, R., Nikura, J., Oka, M., Kyu, R., Sugano, S., Sugiyama, A., Suzuki, Y., Tsunoda, Y., Ueda, M., Xie, Q., Yokomizo, S., Yoshimura, A., Matsubara, K. and Murakami, K.
Genome Exploration Research Group in Riken: Adachi, J., Aizawa, K., Akimura, T., Arawa, T., Carninci, P., Fukuda, S., Hangawa, K., Akimura, A., Hashizume, W., Hayashida, K., Hayatsu, M., Hiramoto, K., Hara, T., Hori, F., Tida, J., Imamura, K., Imotani, K., Ishii, Y., Itoh, W., Kagawa, I., Kanagawa, S., Karoh, H., Kawai, J., Kashikawa-Hirozane, T., Koima, Y., Kondo, S., Konno, H., Kouda, M., Kashikawa-Hirozane, T., Koima, Y., Kana, J., Murata, M., Nishi, K., Nomura, K., Niwazaki, R., Murata, M., Nishi, K., Nomura, K., Sakai, K., Sakazume, N., Nishi, K., Nomura, K., Shinagawa, A., Shiraki, T., Sagani, M., Tagami, M., Tagami, M., Tagawa, A., Taya, Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K., Takahashi, P., Analya, J., Maki, Y., Toya, T., Waki, K., Yasunishi, A., and Hayashi, Y., Tomaru, A., Toya, T., Waki, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              URL: http://cdna01.dna.affrc.go.jp/cDNA/
NIAS Rice Full-Length cDNA Project Team: Kikuchi,S., Satch,K.,
Nagatu,T., Kawagashira,N., Doi,K., Kishimoto,N., Yazaki,J.,
Ishikawa,M., Yamada,H., Ooka,H., Hotta,I., Kojima,K., Namiki,T.,
Obneda,E., Yahagi,W., Suzuki,K., Li,C., Ohtsuki,K., Shishiki,T. and
Yamamoto,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (05-DEC-2001) Shoshi Kikuchi, National Institute of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki 305-8602, Japan (E-mail:skikuchi@mias.affrc.go.jp, Tel:81-29-838-7007, Fax:81-29-838-7007)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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/mol_type="mRNA"
_cultivar="Nipponbare"
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                             Science 301 (5631), 376~379 (2003)
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clone="J033069M07"
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                                                                                                                    to 1283)
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                      JOURNAL
MEDLINE
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AUTHORS
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JOURNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLPVPIIAEVDLYKLDPWDLPEKALFGRKEWYFFTPRDRKYPNGSRPNRAGGRGYWKA
TRADKPVAPROSARTWGIKKALVYFSGRAPRCWTOWINHEYRLADDRAPGGRKGSG
KLDEWVLCRLYNKKUNWEKYKLEQODVASVAAAAPRNHHHQNGEWDAAAADTWSDS
CITHDSDIDNASAGLRHGGGGGGGGGGVAPPRNGFVTVKSDNDWFTGLNRDELQPPYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza sativa (japonica cultivar-group) cDNA clone:J033069M07, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     translation="MAAAVGGSGRRDAEAELNLPPGFRFHPTDEELVVHYLCRKVARQ"
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FLI_CDNA; CAP trapper.
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantee; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
2 (bases 1 to 12017,
Hirano, H.
Direct Submission
Submission
Submitted (28-MAY-1999) Hiroyuki Hirano, Univ Tokyo, Graduate
School of Agricultural and Life Sciences; Yayoi 1-1-1, Bunkyo-ku,
Tokyo 113-8657, Japan (E-mail:ahirano@mail.ecc.u-tokyo.ac.jp,
Tel:+81-3-5841-5065, Eax:+81-3-5841-5063)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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0.0001; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             product="OsNAC4 protein"
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/db_xref="GI:6730938"
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Pred. No.
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/gene="OsNAC4"
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AK073848/c
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      REFERENCE
AUTHORS
                                                                    TITLE
JOURNAL
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SOURCE
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BRNEDBLLLLCOGTFFWGAAYTKILQNISLRRKNILICKTRSSNINGKKKYTSSTTYSTHL
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MELLLLLTYVEGSTGCELINDQLSILFTDWLEWFDKILADDIAIHSSLYLNWNDLKID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="unnamed protein product; orf,len: 235, CAI: 0.15"
                                                                                                                                                                                                                                                                                                                                           is given for each CDS.
lambda clones 4357-3717 are between cosmid 9402 and cosmid 8277.
Location/Qualifiers
                                                                                                                                                Details of the omitted CDS are available on request. The more significant matches with motifs in the PROSITE database are also included but some of these may be fortuitous. The length codons and the calculated codon adaptation index (CAI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /chromosome="chromosome IX"
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462. .1169
                                overlapped and those that are overlapped by more than 50% of their length by a larger CDS have been omitted from this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Saccharomyces cerevisiae"
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complement (1220. .2473)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA'
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chang, H.S., Chen, W., Cooper, B., Glazebrook, J., Goff, S.A., Hou, Y.M., Katajiri, F., Quan, S., Tao, Y., Whitham, S., Xie, Z., Zhu, T. and Zou, G. Plant genes involved in defense against pathogens
Patent: WO 0300898-A 4864 03-JAN-2003;
Syngenta Participations AG (CH)
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On Oct 3, 2002 this sequence version replaced gi:603997.
Notes:
All CDS over 100 codons have been analysed. CDS that are completely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Pred. No. 0.001;
0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                   linear
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                                                                                                                                                                                                                                                                         Sequence 4864 from Patent W003000898.
AX654994
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100.0%; Pred. No. ...
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AACGCIGCIGCIGCIGCIGCIGCI 49
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Barrell, B. and Rajandream, M.A.
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Matches 27; Conserva
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Query Match

ORIGIN

DEFINITION ACCESSION VERSION

KEYWORDS

RESULT 23 SC4357/c

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LOCUS

SOURCE

REFERENCE AUTHORS JOURNAL REFERENCE AUTHORS TITLE JOURNAL

COMMENT

source

SOURCE ORGANISM

KEYWORDS

VERSION

AUTHORS

REFERENCE

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RESULT 22 AX654994/c

DEFINITION ACCESSION

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//db_xref="SGD: 50001419"
//db_xref="SWISS-PROT: P40452"
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IIQSLWKILDSQKPYSESIKLLKLINSLLFYLIDSFQVSTNPSFDETLESAENVDYVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KFKSLMFIITEIGNEMNKRIVKGIKLKSLTKLAFVRSSIDQNVSFLHFIEKVIRIKYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DIYGFVDDLKNIEDLGKISLEHVESECHEFHKKIEDLYTGFQVGKLSKEENLDFRDGI
IKKVKFKINRAKTKSELLIGGCKLTLIDLNKLMKYYGEDPKDKESKNEFFQPFIEFLA
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LREVKKDPEPLRRRKSTKLNEIAINVHEGDVKTRKDEDHVILERTHAMINDIQNI"
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/db_xref="GOA:P40457"

/db_xref="SSD:S0001416"

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YSIYTDLKKGYYENEMMYNVLMVKKEIGVVLDESVKHGAGIEHRITKKRAFSVPADD
YSTTFLLLINSILQGFNNKTALEILNFLKKNNIHNTITFLELAYKDDPNSVVIMEQIK
                                                                                                                                                                                                                                                                                QDSVNKLLDSLQSDEIARRAVTEIDDLNAKISHLNEKLNLVENHDKDHLIAKLDESES
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/note="unnamed protein product; orf, len: 1071, CAI: 0.13,
some similarity with ubiquitin carboxy terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EPSIVKSKKKKSRPFTLHTGTKRRHLDFFGDGITEGHNSNNNYTIFERERSRSPFRM
LGGSGKRSSSSTPFSTGGNDSNNSSDYKNKKLTTVKTINFVTLPKILVIHLSRFYYDL
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Sasaki, T., Matsumoto, T., Yamamoto, K., Sakata, K., Baba, T.,
Katayose, Y., Wu, J., Niimura, Y., Cheng, Z., Nagamura, Y.,
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Yamagata, H., Yamane, H., Yoshiki, S., Yoshihara, R., Yukawa, K.,
Zhong, H., Iwama, H., Zhong, J., Ito, H., Hahn, J. H., Kim, H. I., Eun, M.Y.,
M. Jiang, J. and Gojobori, T.
                                                                                                                                                                                                   / product="0.04" | phosphate dehydrogenase" | product="0.04" | product="0.04" | product="0.04" | product="0.04" | product="0.04" | protein id="0.0486123.1" | protein id="0.0486123.1" | protein id="0.04.827768" 
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IVLPSFYCPKDMGILDVRTSDGRVMFFLPWQGKVLAGTTDIPLKQVPENPMPTEADIQ
DILKELQHYIBFPVKREDVLSAWAGVRPLVKDPRTIPADGKKGSATQGVVRSHFLFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSFNDSRLNATLAITAVENGATVLNYVEVQKLIKDPTSGKVIGAEARDVETNELVRIN
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Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
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On May 24, 2002 this sequence version replaced gi:16930116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza sativa (japonica cultivar-group) genomic DNA, chromosome 1,
BAC clone:05JNBa0085D07, complete sequence.
                                                                               /note="gut2, len: 649, CAI: 0.19, GPDA YEAST P32191
GLYCEROL-3-PHOSPHATE DEHYDROGENASE, frameshifts with
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Nature 420 (6913), 312-316 (2002)
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0.0011;
0; Indels
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100.0%; Pred. No. 0.001
--ive 0; Mismatches
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                                                                                                                                                                        published sequence"
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AP004331.2 GI:21203157
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Best Local Simi:
Matches 27;
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organism="Oryza sativa"
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/cultivar="Nipponbare"
/db_xref="taxon:39947"
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orientation of the sequence is from -21M13 to M13rev of the BAC
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Oryza sativa (japonica cultivar-group)
Bukaryota, Viridiplantas, Streptophyta, Embryophyta, Tracheophyta,
Spermalophyta, Magnollophyta, Liliopsida, Poales, Poaceae,
Ehrhartoideae, Oryzeae, Oryza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oryza sativa (japonica cultivar-group) genomic DNA, chromosome 1, BAC clone:B1148D12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence was identified as CDM:10210908 by the submitter. For more information on this record e-mail to fly@celera.com.
*NOTE: This is a "working draft" sequence.
* This sequence will be replaced
* by the finished sequence as soon as it is available and
* the accession number will be preserved.
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTG; HTGS_PHASE2.
Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neopera; Madopterygota; Diptera; Brachycera; Muscomorpha;
Phydroida; Drosophilidae; Drosophila.
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                                                                         (japonica cultivar-group)"
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100.0%; Pred. No. 0.0011;
ive 0; Mismatches 0; Indels 0
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                                                                                                                                                                                                                                                                                       51 AACGCTGCTGCTGCTGCTGCTGCT 77
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/db_xref="taxon:7227"
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AP003411.3 GI:15
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Direct Submission

Augrobiological Sciences, Rice Genome Research Program; Kannondai Agrobiological Sciences, Rice Genome Research Program; Kannondai Agrobiological Sciences, Rice Genome Research Program; Kannondai (E-mail: tsasaki@mias.fffrc.go.ip, URL:http://rgp.dna.affrc.go.ip/, Tal:81-298-38-7441, Fax:81-298-38-7468)

On Sep 7, 2001 this sequence Version replaced gi:14624988.

Genes were predicted from the integrated results of the following: Genes were predicted from the integrated results of the following: Gotober 1998 Version). The genomic sequence was searched against (Etp://ncbi.nlm.nih.gov/blast/db) and the cDNA sequence database at RGP. Protein homologies of the coding regions were searched against the identified cDNA sequences using BLASTP2.0. ESTS represent the identified cDNA sequences using BLASTP2.0. with the corresponding DDBJ accession no. and RGP clone 1D.

A gene with identity or significant homology to a protein is classified based on the protein name to indicate the homology (covering such as same name, 'putative-' and 'like protein'. A gene without significant homology to any protein but with EST homology (covering almost the entire length of partial sequence) is classified as a 'hypothetical' protein.

The orientation of the sequence is from Miller to -21Mill of the BAC clone. This sequence of Bill48D12 clone has an overlap with P0676H03 (DDB3: AP002285) at the position 1 to 45,178 and with P0676H03 and ends at the position 75,992 of P045H12. Detailed annotation on overlap and assembly quality together with annotation of this entry is available at the position 25,058 to 11,750. de at the position 25 clone. The protein of this annotation of this animal annotation of this entry is available at the position 1 to 45,178 and with the position 25 clone with the position 25 clone with the position 25 clone with the position 25 clone with the position 25 clone with the position 25 clone with the position 25 clone with the position 25 clone predicted with annotation of this energy contact and the
Sasaki, T., Matsumoto, T., Yamamoto, K., Sakata, K., Baba, T., Katayose, Y., Wu, J., Nilimura, Y., Cheng, Z., Nagamura, Y., Antonio, B.A., Kanamori, H., Hosokawa, S., Masukawa, M., Arikawa, K., Hayashi, M., Okamoto, M., Ando, T., Aoki, H., Arita, K., Hamada, M., Haijshita, S., Honda, M., Itoh, Y., Inabuchi, M., Kamiya, K., Karasawa, W., Katasahi, N., Kokuta, A., Kobayashi, N., Komo, I., Machita, K., Machara, T., Mizuno, H., Mizubayashi, T., Mushi, Y., Nagasaki, H., Nakashima, M., Nakama, Y., Nakamica, M., Saji, S., Sakai, K., Shibata, M., Shimokawa, T., Shomura, A., Song, J., Takazaki, Y., Terasawa, K., Tsuji, K., Waki, K., Yamagata, H., Yamane, H., Yoshiki, S., Yoshihara, R., Tsuji, K., Waki, K., Zhong, H., Iwama, H., Endo, T., Ito, H., Hahn, J. H., Kim, H. I., Eun, M. Y., Maha, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Shipa, J., and Gojobori, T., Terasana, M., Shimokawa, K., Nano, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Nano, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Nano, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Nano, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Nano, M., Jang, J., and Gojobori, T., Terasana, M., Shimokawa, K., Shimok
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/note="contains ESTS AU075972(C10012),D21888(C10012)"
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'protein_id="Ba56480.1"

Daref="G1:15528779"
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Sasaki,T., Matsumoto,T. and Yamamoto,K.
Direct Submission
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gene

CDS

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Complement (join(14359. 14600,14752. 14929,15013. 15084, 15363. 15458,15562. 15578,15760. 15916,16010. 16107, 16180. 16338,16409. 17578,16788. 16907, 17208. 17728, 17769. 16879. 16879. 18956. 17586,17692. 17768,18098. 18209,18297. 18479, 18656. 18757,18857. 18958,19057. 19152,19721. 19798, 18656. 18757,18857. 201756,20175. 20136,20176. 20186,2018,2018. 20186,2018. 20186,20176. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 21678. 22657. 22657. 22667. 22667. 22687. 22687. 22687. 22687. 22687. 22687. 22687. 22687. 22687. 22688. 22687. 226887. 28681,28881,28887. 28681,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,28881,2
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TSFLHRHHQSLRWEGDDAKRONTYVGNAFSSEASMSPEYAFSPSIALPSDPPPAASRV
TSFLHRHQSLRWEGDDAKRONTYVGNAFSSEASWSPEYAFSPSIALPSDPPPAASRV
RCLYMSQDSQCPHGLEPFLLPPARGHATHALTGPROPROGTYRLAGGANRPPV
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                                                                 KLDEWVLCRLYNKKNNWEKVKLEQQDVASVAAAAPRNHHHQNGEVMDAAAADTMSDSF
QTHDSDIDNASAGLRHGGCGGGGFGDVAPPRNGFVTVKEDNDWFTGLNFDELQPPYMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMSGFSGRFGFSDRQIKKVDYSVTGDQLHVELAWHENPHRWHRRTAAAGGSQPSYVVA
ESQCGRPNTAAGLHGRTVFSRLVAYYYTCSNYCYLRRCSLYVDKCSRTPLPLRRQRVH
LHLSGK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="BAB64822_1"
/db_xref="G1:15528781"
/translat_ton="MSTEDEKLIKEAKKLPWDERLQHKNWKYRNDANIDIAALCDSITDFKLARSHSEFSPLFKTVADSNAPVQEKALDALLAFQRAADADASRYAKEVCDSITCRPKTVEREGPLIWYELEARSFYLESHEKAVKNKVAKAVVDALDVMFQALSEFGAKVVPFKKTUKKAQAAFLLWYELEARSKSKGLTLELCRWIGKEPVKAILFEKMRDTMK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KELEAELANVSGIAKPTRKIRSEQEKELEEEVVPEAAGTNNSEEAVPEAPMEIDEYDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VDPVDILTPLEKSGFWDGVKATKWSBRRDAVBLITKLASTKKTAPGDFHBICRTIKKL
ITDVNLAVSVBATQAIGNLAKGLRTHFSGNSRVLLPVLLEKLKEKKPTWTEALSGTLO
AMHKSGCITLLDVIBDVRVAVKNKVPLVRSLTLNWVAFCIETSNKATVLKLHKEYVPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CMECLNDGTPEVRDASFSVLTAIAKMVGMKPLERSLEKLDDVRKKKLSDMIGSASDTT
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DSSSMRRSAASMLSGKKPVQAVPATKKSGPAKSATAKKTDGGPQSKASAAPVIEDVEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEMSLEEIEEKLSSVVKSETISOLKSTVWKERLEAISMLKQEVESLTELDKSAELLVR
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IGLQSSAAATRNATIKLIGVLHKFVGPDIKGFLSDVKPALLSTLDAEYEKNPFEGTAS
                                                                                                                                                                                        NLQHWQMQMVNPAAPGHDGGYLQSISSPQMKNWQTILPPF"

join(6090. .6317,6421. .6572,8325. .8440.8715. .8803,

9502. .9589,9669. .9774,10773. .10866,11020. .11192,

11536. .11575,12734. .12875,13216. .13303,13676. .13730)

/gene="B1148D12.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             join(6090. .6317,6421. .6572,8325. .8440,8715. .8803,
9502. .9589,9669. .9774,10773. .10866,11020. .11192,
11536. .11575,12734. .12875,13216. .13303,13676. .13730)
/gene="B1148D12.2"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="B1148D12.3"
/note="contains EST C25950(C11258)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein"
/codon_start=1
/protein_id="BAB64821.1"
/db_xref="GI:15528780"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note="contains EST
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CDS

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GPADWREALDIVALGLIPGOYBERMYICHBLYDAYDPESSYLDDLIKEADRIVSCHAV
WITFOLKRLAHAVKEGTLDMLITELLIMLIDERVPLMDDGSQLIKALNVLALKILDNAE
RTSSFVVLINLLRPLDPSRWESPTPEBELLAWKNYKNVLHELVKLKALNVLAKKILDNAE
RTSSFVVLINLLRPLDPSRWESPTPEBELLAWKNYKNVLHELVKLKGTALKTLKVLQSTTYBV
DIDRILQSTHIYLOGRIGHBETRRRAGADDKFRRAWKTVLHELVKLKGTALKGTYLKGUYP
IDABPQPIILAYIDLNLQTLAAARMLTPSGTMGQTHWGDAGSNNPNPSTHSTDAQLKQ
ELAAVFRKGDKGYQTOTGLYELYRTTQLYRVDIFAQLQDASSFRTYIRDAQLKQ
ELAAVFRKGDKGYQTOTGLYELYRTTQLYRVDIFAQLQDASSFRTYIRDADAGGDTHPFRGT
LDALRERMKSIQAAAVGANFPROVQARPLPSNNGNTLHGGTRLDADPGTQNIIPPRDER
ALGSLQARWERLKGGSMEP."

GOMDLEMENT (41340. . 43701)
//Gene="Bil44bdl2.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,301146995. 47010. 47163. 47331,48588. .48659,48754. 48915,
49020. .49094,49172. .49243,49329. .49400,49485. .49553,
49972. .50106,50186. .50655,50730. .50888,50981. .51120,
51214. .51433,51545. .51780,51867. .52370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .48915,
VERAHKRIQPTGTVELFTALEARLYDSNKNIJVWATLSTIGGLASAMGFAVEKSSKGIL
ADVLKCLGDNKKHMRECTLTALDLWVAAQLDKMVPYITVTLGDQKTGSEGRKDLFDM
ADVLKCLGDNKKHMRECTLTALDLWVAAAQLDKMVPYITVTLGDQKTGSEGRKDLFDM
LESKHASNMSPDSEALPLLKPSASSLWDKSSEVRAAESFWRITIKTGCDDVVAKNLKD
LPSPTLAIVAERLKISTVHEGFSDSVKMYTSMSLPSKAGSKNNKHGPNDRGSNVSKA
VSQRGTPARSSSVTMSSQDSIGSQALFNIKDSNKEBRERRYLVRKFKEEFPREQIDE
LKIELFRHFREDVSLRLWNSDFKRQIDGIELLQKALPSSRKEVIELDILLRWFVLRF
CESNTTCLLKVLDFLPELFDVLKDQSYMLTEARAAIFLDCLMRKSGHNIEKVREKMGE
                                                                                                                                                                                                 LIKOMNITYSLPKILPYILEGIRSKNNRTRIECVDIIGYFMDHIGTEVSGILKNILPSV
AALTAERDGEIRKAALNTLATAYKNIGDDVWRYVGKISDAQRSMLDDRFKWKAREMDK
RREGRPGDARAALRRSVRENGSDIAEQSGEAVSRSMAGENFGYSDAHNVPRQMATATP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus chromosome 14 clone RP24-201114 map 14, *** SEQUENCING IN PROGRESS ***, 2 ordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ó
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Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N.,
Anderson,S., Barna,N., Bastien,V., Boguslavkiy,L., Boukhgalter,B.,
Brown,A., Camarata,J., Campopiano,A., Chang,J., Chazaro,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   jōin(46995. .47010,47163. .47331,48588. .48659,48754. .41
49020. .49094,49172. .49243,49329. .49400,49485. .49553,
49972. .50106,50186. .50655,50730. .50888,50981. .51120,
51214. .51433,51545. .51780,51867. .52370)
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HTG; HTGS_RCLIVEFIN.
HTG; HTGS_ROUSE
Mus musculus (house mouse)
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pseudogene
similar to Arabidopsis thaliana chromosome 2, At2g35630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probably inactive due to no termination codon in CDS
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Pred. No. 0.0012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="putative receptor protein kinase"
/protein id="BAB64823.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
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Birren, B., Nusbaum, C. and Lander, E.
Mus musculus chromosome 14, clone RP24-201114
Unpublished
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ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="B1148D12.4"
'note="^^-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="contains EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.8%;
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AUTHORS
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AUTHORS
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KEYWORDS
SOURCE
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seq29-na-truncated.olig10.rge

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organism="Mus musculus"
                                                                                                               /mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="14"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
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AC138056/c
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KEYWORDS
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Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Gride, S., Gord, S., Goyette, M., Graham, D., Grand-Pierre, N., Hagos, B., Heaford, R., Horton, L., Hulme, W., Illev, I., Johnson, R., Jones, C., Kamat, A., Kartas, A., Kells, C., Lakocque, K., Landers, T., Lehoczky, J., Levine, R., Liu, G., MacLean, C., Macdonald, P., Major, J., Martus, R., Mathers, R., Mathova, T., Mardas, T., Marday, V., Murphy, T., Naylor, J., Nguyen, C., Norman, C.H., O'Connor, K., McDheeters, R., Meldrin, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Rail, D., O'Ram, C., Roy, A., Santos, R., Schauer, S., Schuback, R., Seman, J., Rosetti, M., Spence, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Wo, A., Wilson, Trigillo, J., Vassiliev, H., Viel, R., Wilson, T., Waman, D., Ye, W.J., Young, G., Limer, A., and Zody, M., Ye, W.J., Young, G., Submitted, J.,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CE Acceptant, STO. Limiters Siteet, Campringe, mr. Uziet, USA
Researd, STO. Limiters Siteet, Campringe, mr. Uziet, USA
Anderson, M., Arachchi, H.M., Baraina, N., Bastien, V., Bloom, T.,
Boguslawkiy, L., Boukhalter, B., Camarata, J., Chang, J., Choepel, Y.,
Collymore, A., Cook, A., Cooke, P., Corum, B., DeArellano, K.,
Diaz, J.S., Dodges, S., Dooley, K., Dorris, L., Erickson, J., Faro, S.,
Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S.,
Ranat, A., Karatas, A., Kells, S., Lilev, I., Johnson, R., Jones, C.,
Lindblad-Toh, K., Liu, X., Lui, A., Mabbitt, R., Maclean, C.,
Madonnid, P., Major, J., Manning, J., Matthews, C., McCarthy, M.,
Madorim, J., Meneus, L., Minny, T., Mlenga, V., Murphy, T., Naylor, J.,
Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,
O'Meil, D., Ollver, J., Peterson, K., Phukhang, P., Pierre, N.,
Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P.,
Roman, J., Schauer, S., Schupback, R., Stylanovic, N., Stubs, M.,
Talamas, J., Tesfave, S., Theodore, J., Topham, K., Travers, M.,
Wann, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
Direct Submission
Submitted (04-DEC-2003) Whitehead Institute/MIT Center for Genome
Research, 320 Charles Street, Cambridge, MA 02141, USA
On Dec 4, 2003 this sequence version replaced gi:38304329.
Smit, A.F.A. & Ceren, P. (1996-1997)
http://ftr.cenome.washintoring. Physore Herri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (24-NOV-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
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This sequence will be replaced.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by the finished sequence as soon as it is available the accession number will be preserved.

1 116945: contig of 116945 bp in length
116946 117045: gap of 100 bp
117046 143558: contig of 26513 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://ftp.genome.washington.edu/RM/RepeatMasker.html
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------ Project Information
Center project name: L18644
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TITLE JOURNAL

COMMENT

JOURNAL

TITLE

REFERENCE AUTHORS source

FEATURES

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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Spermātophyta; Magnoliophyta; ēudicôtyledons; core eudicots;
rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (11-DEC-2002) Department Of Chemistry And Biochemistry, The University of Oklahoma, 620 Parrington Oval, Room 208, Norman, OK 73019, USA

3 (bases 1 to 158606)

Shall, S., Lin, S., Lin, S., Dixon, R., May, G., Sumner, L., Gonzales, B., Cook, D., Kim, D. and Roe, B.A.

Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (09-DEC-2003) Department Of Chemistry And Biochemistry, the University Of Oklahoma, 620 Parrington Oval, Room 208, Norman, OK 73019, USA ON Sequence version replaced gi:38502358.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC138056 158606 bp DNA linear HTG 09-DEC Medicago truncatula clone mth2-1316, WORKING DRAFT SEQUENCE, 3
                                                                                                                                                                                                                          Gaps
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Shaull, S., Lin, S., Dixon, R., May, G., Sumner, L., Gonzales, B., Cook, D., Kim, D. and Roe, B.A.
Medicago truncatula BAC Clone mth2-1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished

2 (bases 1 to 158606)
Shaull,S., Lin,S., Dixon,R., May,G., Sumner,L., Gonzales,B., Cook,D., Kimi,D. and Roe,B.A.
Direct Submission
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1 103890 103899: gap of unknown length 103890 131370: contig of 27381 bp in length 131371 158606: contig of 27381 bp in length 13171 158606: contig of 27136 bp in length.
                                                                                                                                                                                                                      0;
                                                                                                                                                             Length 143558;
                                                                                                                         Score 27; DB 2; Length 143.
Pred. No. 0.0012;
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/clone="RP24-201114"
/clone_lib="RPC1-24 Male Mouse BAC"
                                                                                                                                                ch 5.0%; Score 27; DB 1 Similarity 100.0%; Pred. No. 0.0 27; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                97456 derderderderderderrderraka 97430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTG; HTGS PHASE2; HTGS DRAFT.
Medicago truncatula (barrel medic)
Medicago truncatula
                                                                                                                                                                                                                                                                          54 GCTGCTGCTGCTGCTGCTTAA 80
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AUTHORS
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Exkaryorda; Metazoa; Archropoda; Hexapoda; Insecta; Pterygota;

Exkaryorda; Metazoa; Archropoda; Hexapoda; Insecta; Pterygota;

Borptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilade; Drosophila.

Stallaces I to 163466)

Stallaces I to 163466)

Stallaces I to 163466)

Stallaces I to 163466;

Stallaces I to 163466;

Rogers, Y., An, H., Baldwin, D., Amanatides, P.G., Brandon, R.C., Rogers, Y., An, H., Baldwin, D., Banzon, J., Beesne, K.T., Busam, D.A., Carlson, K., Dorsett, V., Doup, L.E., Doyle, C., Dresnek, D., Farfan, D., Ferriera, S., Frise, E., Galle, R.F., Garg, N.S., George, R.A., Gonzalez, M., Houck, J., Hoskins, R.A., Hostin, D., Howland, T.J., Ibegwam, C., Jalli, M., Kruse, D., Li, P., Mattei, B., Moshrefi, A., Murno, J., Park, S., Patel, S., Pfeiffer, B., Munoo, J., Phouaneavong, S., Pittman, G.S., Puri, V., Richards, S., Scheeler, F., Stapleton, M., Strong, R., Svirskas, R., Tector, C., Williams, S.M., Thombond, J., Rowen, J., Saudening of Drosophila chromosome X, region 15B-15E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Berkeley Drosophila Genome Project
Lawrence Berkeley National Laboratory, MS 64-121
Berkeley, CA 94720
This sequence was assembled using end sequences from a whole genome shotgun and from subclones of this BAC and its neighboring clones. For further information about this sequence, including its location and relationship to other sequences, please visit our sequence archive Web site (http://www.fruitfly.org/sequence) or send email
                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila melanogaster, chromosome X, region 15E-15E, BAC clone BACK15i12, complete sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished

2 bases 1 to 163466)

Celniker,S.E., Agbayani,A., Arcaina,T.T., Baxter,E., Blazej,R.G.,
Butenhoff,C., Champe,M., Chavez,C., Chew,M., Ciesiolka,L.,
Doyle,C.M., Farfan,D.E., Galle,R., George,R.A., Harris,N.L.,
Nosking,R.A., Houston,K.A., Hummasti,S.R., Karra,K., Kearney,L.,
Kim,E., Lee,B., Lewis,S., Li,P., Lomotan,M.A., Maxda,P.,
Moshrefi,A.R., Moshrefi,M., Nixon,K., Pacleb,J.W.,
Pfeiffer,B., Poon,L., Sequeira,A., Sethi,H., Snir,E.,
Svirskas,R.R., Wan,K.H., Weinburg,T., Zhang,R., Zieran,L.L. and
                                                                                                                                                                                                                                         Gaps
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0
                                                                                                                                                                                  Length 158606;
                                                                                                                                                     Score 27; DB 2; Length 150-
Pred. No. 0.0012;
Pred. Tatches 0; Indels
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                                                                                                                                                          5.8%; Scor.
100.0%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                             84940 TAACGCTGCTGCTGCTGCTGCTGC 84914
                                                                                                                                                                                                                                                                                 50 TAACGCTGCTGCTGCTGCTGCTGCTGC 76
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    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC010921.11 GI:13324755
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Best Local Similarity
Matches 27; Conserv
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AC010921/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
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AUTHORS
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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation amnotation may not be found in the sequence submission colly a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats, all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Bm:, EMBL: Sw:, SWISSPROT; Tr:, TREMEL; Wp:, WORMPEP; Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C alegans/wormpep Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'dr' were identified by the Recon repeat discovery system (ZHIL-281G7 is from a CHORI-211 BAC library)

UNCTOR: praces.
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Cyptinformes; Cyptinidae; Danio.
(bases 1 to 170178)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (23-MAR-2003) Wellcome Trust Sanger Institute, Hinxton, dembridgeshire, CB10 15A, UK. E-mail enquirites: zfish-help@sanger.ac.uk Clone requests: clonexequest@sanger.ac.uk on Mar 23, 2003_this sequence version replaced gi:29125265.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL954848 170178 bp DNA linear VRT 23-MAR-20 Zebrafish DNA sequence from clone CH211-281G7, complete sequence.
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/clone="BACRI5L12 (D898)"
/clone="BACRI5L12 (Rowell Park Cancer Institute
Drosophia melanogaster BAC library, partial EcoRI in
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100.0%; Pred. No. 0.0012;
iive 0; Mismatches 0; Indels 0
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Contact: zfish-help@sanger.ac.uk
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Shaull, S., Lin, S., Dixon, R., May, G., Sumner, L., Gonzales, B., Cock, D., Kim, D. and Roe, B.A.

Shaull, S., Lin, S., Dixon, R., May, G., Sumner, L., Gonzales, B., Cock, D., Kim, D. and Roe, B.A.

B. Submitted (03-DBC-2002) Department Of Chemistry And Biochemistry, The University of Oklahoma, 620 Parrington Oval, Room 208, Norman, OK 73019, USA

E. Shaull, S., Lin, S., Dixon, R., May, G., Sumner, L., Gonzales, B., Cock, D., Kim, D. and Roe, B.A.

Direct Submission

L. Submitted (10-DEC-2003) Department Of Chemistry And Biochemistry, The University of Oklahoma, 620 Parrington Oval, Room 208, Norman, OK 73019, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Medicago truncatula clone mth2-6c16, WORKING DRAFT SEQUENCE, 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Medicago truncatula
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots,
rosids, eurosids I, Fabales, Fabaceae, Papilionoideae, Trifolieae,
                                 /map="15E-15E"
/clone="BACR06G02 (D1110)"
/clone=1bb="RPCI-98 (Roswell Park Cancer Institute
Drosophila melanogaster BAC library, partial EcoRI in
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Shaull,S., Lin,S., Dixon,R., May,G., Sumner,L., Gonzales,B.,
Cook,D., Kim,D. and Roe,B.A.
Medicago truncatula BAC Clone mth2-6c16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                              Length 172069;
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2236: gap of unknown length
4244: contig of 2008 bp in length
4344: gap of unknown length
7875: contig of 3531 bp in length
7875: gap of unknown length
10848: contig of 2873 bp in length
10848: contig of 2873 bp in length
14384: contig of 3436 bp in length
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100.0%; Pred. No. 0.0012;
tive 0; Mismatches 0;
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HTG; HTGS PHASE1; HTGS DRAFT.
Medicago truncatula (barrel medic)
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                                                                                                                                            pBACe3.6) "
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RS Gelniker,S.E., Adams, N.D., Kronmiller,B., Tyler,D., Wan,K.H.,
Rogers,Y., An,H., Baldwin,D., Banzon,J., Beeson,K.Y., Busam,D.A.,
Rogers,Y., An,H., Baldwin,D., Banzon,J., Beeson,K.Y., Busam,D.A.,
Carlson,J.W., Center,A., Champe,M., Davemport,L.B., Dietz,S.M.,
Dodson,K., Dorsett,V., Doup,J.E., Doyle,C., Dresnek,D., Farfan,D.,
Gonzalez,M., Houck,J., Hoskins,R.A., Hostin,D., Howland,T.J.,
Ibegwam,C., Jalali,M., Kruse,D., Li,P., Mattei,B., Moshrefi,A.,
McIntosh,T.C., Moy,M., Murphy,B., Melson,C., Nelson,K.A., Nunco,JJ.,
Pacleb,J., Paragas,V., Park,S., Patel,S., Pfeiffer,B., Noshrefi,A.,
Rapleton,M., Strong,R., Virtekas,R., Tector,C., Williams,S.M.,
Zaveri,J.S., Smith,H.O., Rubin,G.M. and Venter,J.C.
Sequencing of Drosophila chromosome X, region 15B-15B
Unpublished (1998)
Claiker,S.E., Agbayani,A., Arcaina,T.T., Baxter,E., Blazej,R.G.,
Butenhoff,C., Champe,M., Chavez,C., Chew,M., Ciesiolka,L.,
Hoskins,R.A., Houston,K.A., Hummasti,S.R., Karra,K., Kearney,L.,
Kim,B., Lee,B., Lewis,S., Li,P., Lomotan,M.A., Mazda,P.,
Peiffer,B., Lewis,S., Li,P., Lomotan,M.A., Mazda,P.,
Fleiffer,B., Lewis,S., Li,P., Lomotan,M.A., Mazda,P.,
Fleiffer,B., Poon,L., Sequeira,A., Sethi,H., Snir,E., and
Ruhhin,C.M.
Ruhhin,C.M.
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Drosophila melanogaster, chromosome X, region 15E-15E, BAC clone
BACR06G02, complete sequence.
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Submitted (21-OCT-1999) Drosophila Genome Center, Lawrence Berkeley
Laboratory, MS 64-121, Berkeley, CA 94720, USA
On Dec 13, 2001 this sequence version replaced gi:6466928.
Sequence submitted by:
Berkeley Drosophila Genome Project
Lawrence Berkeley National Laboratory, MS 64-121
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                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster (fruit fly)
Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
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Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 172069)
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0
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/mol_type="denomic DNA"
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Best Local Similarity 100.0%; Pred. No. 0.0012;
Matches 27; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                             36000 ACGCTGCTGCTGCTGCTGCTGCTT 36026
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1. .172069
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Mus musculus BAC clone RP24-198P16 from chromosome 2, complete
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5 (Dases 1 to 177062)
MCPherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (29-AUG-2002) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 177062)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="mth2-6c16"
/clone_lib="Medicago truncatula BAC library H2'
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14885 14484: gap of unknown length 1485 1877: contrig of 3793 bp in length 1877: contrig of 3793 bp in length 1877: contrig of 3429 bp in length 21806: contrig of 3429 bp in length 21807 27052: contrig of 5146 bp in length 1753 27152: gap of unknown length 1753 31198: contrig of 5146 bp in length 1753 31198: gap of unknown length 18320 35419: gap of unknown length 35519: contrig of 4121 bp in length 3560: gap of unknown length 4200 contrig of 4087 bp in length 44258: contrig of 4652 bp in length 44258: contrig of 4652 bp in length 4559 57595: contrig of 13237 bp in length 57595: contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 43251 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in length 6750 contrig of 71286 bp in le
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5.8%; Score 27; DB 2; Length 172
Best Local Similarity 100.0%; Pred. No. 0.0012;
Matches 27; Conservative 0; Mismatches 0; Indels

    .172332
        forganism="Medicago truncatula" mol_type="genomic DNA" db_xref="caxon:3880"

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Unpublished (2001)
3 (bases I to 177062)
McPherson, J.D. and Waterston, R.H.
Direct Submission
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Mus musculus
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AC121924.3 GI:22539273
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                                 Wilson, R.
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AC121924
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63108, USA
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Mapping information for this clone was provided by Dr. Wes Warren,
Department of Genetics, Washington University, St. Louis MO. For
additional information about the map position of this sequence, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The RPCI-24 BAC Library has been constructed by Pleter de Jong and coworkers (http://www.chori.org) from male CS7BL/67 mouse spleen and/or brain genomic DNA. The clone and detailed information can be obtained from Pleter de Jong and coworkers at http://www.chori.org
                                                                                                                                                                                                                                                                                                                                                                                                                   NOTICE: This sequence may not represent the entire insert of this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats, all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                           clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEIGHBORING SEQUENCE INFORMATION:
This sequence is the entire insert of the clone. This clone is
overlapped by AC112268.
                                                                       Submitted (11-NOV-2003) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63 On Aug 29, 2002 this sequence version replaced gi:22476077.
                                                                                                                                                                            Center: Washington University Genome Sequencing Center
Center code: WUGSC
                                                                                                                                                                                                                                             Web site: http://genome.wustl.edu
Contact: submissions@watson.wustl.edu
                                                                                                                                                                                                                                                                                                     Center project name: M BB0198P16
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/mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="2"
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clone_lib="RPCI-24"
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/rpt_family="MalR"
4693. .4845
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/rpt_family="Alu"
5382. .5453
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/rpt_family="ERVK"
228. .1462
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692. .3019
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1846. .4975
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5494. .7230
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5183. 5201
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                       Wilson, R.
Direct Submission
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Birren,B. Linton,L., Nusbaum,C., Lander,B., Ali,A., Allen,N.,
Birren,B., Linton,L., Nusbaum,C., Lander,B., Ali,A., Allen,N.,
Anderson,S., Barna,N., Bastien,V., Boguslavkiy,L., Boukhgalter,B.,
Brown,A., Camarata,J., Calmoppiano,A., Chang,J., Chazaro,B.,
Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cook,A.,
Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Faro,S.,
Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna,S.,
Ginde,S., Govette,M., Graham,L., Grand-Pierre,N.,
Hagos,B., Heaford,A., Karraes,A., Kells,C., LaRocque,R.,
Jones,C., Kamat,A., Karraes,A., Kells,C., LaRocque,R.,
Maclaen,C., Maconald,P., Major,J., Marquis,N., Mathews,C.,
Macland,P., Major,J., Marquis,N., Mathews,C.,
Mcarthy,M., McEwan,P., McKernan,K., McPheeters,R., Heldrim,J.,
Meneus,L., Mihova,T., Mlenga,V., Murphy,T., Naylor,J., Naylor,J.,
Norbu,C., Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D.,
Oliver,J., Peterson,K., Phunkhang,P., Pierre,N., Pollara,V.,
Raymond,C., Retta,R., Kieback,M., Riley,R., Rise,C., Rogov,P.,
Raymond,C., Retta,R., Kieback,M., Santos,R., Schupback,R.,
Seaman,S., Severy,P., Spencer,B., Stange-Thomann,N., Stojanovic,N.,
Yiel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G.,
Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
Direct,Submission,
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Mus musculus clone RP23-159D6, WORKING DRAFT SEQUENCE, 8 unordered
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Birren, B., Nusbaum, C. and Lander, E.
Mus musculus, clone RP23-15906
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                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 5.8%; Score 27; DB 10; Length 177062; Best Local Similarity 100.0%; Pred. No. 0.0012; Matches 27; Conservative 0; Mismatches 0; Indels 0;
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Mus musculus (house mouse)
Mus musculus
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/rpt_family="B2"
complement(44666. .44738)
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38707. 38775
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44495, 44556
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[5543]. 15695
[504]. 20873
[7010. 20873]. 20873
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34095.34169

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14531. 14824
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24653. .24822
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25552. .25755
/rpt_family="B2"
27915. .27973
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8189. .8438
                                                                                                  /rpt_family="B2"
8647. 9273
/rpt_family="L1"
9298. 9577
/rpt_family="B4"
9580. 10116
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 1388. .7448
rpt_family="L1"
684. .7851
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0961. .11004
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9135.
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3 (bases 1 to 185722)

Birren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N., Anderba, M., Bastien, V., Bloom, T., Baderba, M., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Dogley, E., Dooley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagoplan, D., Hagos, B., Graham, L., Grand-Pierre, N., Hafez, M., Hafez, M., Hagos, B., Chand, J., Houle, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, X., Lui, A., Mabbitt, R., Maclean, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P., Najor, J., Peterson, K., Phunkhang, P., Pierre, N., Rachugha, A., Ramasamy, U., Raymond, C., Retta, R., Kise, C., Rogov, P., Roman, J., Schauer, S., Schuback, R., Seaman, S., Severy, P., Smith, C., Talamas, J., Trackaraman, V., Schube, M., Travers, M., Vassillev, H., Venkataraman, V.S., Viell, R., Vola, A., Milson, B., Wu, X., Direct Submission

N., Shimitrad, Unatur, A., Matthews, M., Milson, B., Wumitre, A., Harm, Johnson, M., Storian, Fordon, Shimitrad, Unatur, J., Schuback, L., Zimmer, A., and Zody, M., Shimitrad, Unatur, J., Shimitrad, Travers, M., Shimitrad, M., Shimitr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (18-JUN-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on Jun 18, 2003 this sequence version replaced gi:22380811.
All repeats were identified using RepeatMasKer:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: sequence submissions@genome.wi.mit.edu
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t: gap of 100 bp
c: gap of 667 bp in length
c: gap of 100 bp
c: contig of 1587 bp in length
s: gap of 100 bp
c: contig of 7814 bp in length
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COMMENT

FEATURES

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Submitted (25-JUL-2002) Lita Annenberg Hazen Genome Sequencing Center, Cold Spring Harbor Laboratory, 1 Bungtown Road, Cold Spring Center, Cold Spring Harbor, NY 11724, USA sequence version replaced gi:18201769.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the
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3 (bases 1 to 188834)
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Genomic sequence for Mus musculus, clone RP23-27007, complete
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/wol_type="genomic DNA"
/db_xref="k=xxon:10090"
clone="kp21-159D6"
/clone_lib="RPCI-23 Female Mouse BAC"
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100.0%; Pred. No. 0.0012;
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/note="assembly_fragment"
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/note="assembly_fragment"
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/note="assembly_fragment"
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/note="assembly_fragment
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vector_side:right"
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Best Local Similarity 100..
Best Local 27, Conservative
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Direct Submission
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Muzny, D. Marie, Metker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Angudan, D., Allen, H., Alsbrooks, S., Amin, A., Angudan, D., Anguladaranike, D., Bander, H., Basadu, K., Blair, J., Coasar, J., Cardens, J., Chen, G., Coyle, M., Cree, A., D'Souza, L., Davila, M. L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Davila, M. L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Draper, H., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Braper, H., Davis, C., Davy-Carroll, L., De Anda, C., Deder, J., Ernandez, S., Fille, W., Filley, M., Flaggy, M., Forbes, L., Foster, M., Ganza, M., Handarathe, P., Hayaland, W., Hamil, C., Hamilton, C., Hamilton, K., Harandez, R., Hines, S., Hladur, S.L., Hodgson, A., Hogues, M., Jackson, A., Jackson, A., Jackson, A., Jackson, A., Jackson, M., Jackson, M., Jackson, J., Jackson, M., Liu, W., Liu, W., Liu, Y., Liu, W., Liu, W., Liu, Y., Liu, W., Liu, 
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus clone CH230-339N2, WORKING DRAFT SEQUENCE, 4 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                     Gaps
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0
                                                                                                                                                                                                                                                                                                         Length 188834;
                                                                                                                                                                                                                                                                        DB 10; her.
assembly was confirmed by restriction digest.
Location/Qualifiers
1. :18834
/ Organiem="Mus musculus"
/ mol_type="genomic DNA"
/ db.xref="kaxon:10090"
/ clone="RRP23-27007"
/ clone="Ibb="RRPC1-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC114715.5 GI:25008972
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                 Query Match 5.8*; Score 2,, 25 Best Local Similarity 100.0%; Pred. No. 0.0 Matches 27; Conservative 0; Mismatches
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LOCUS

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Purect Submission

Morley, K.C.

Direct Submission

Submitted (11-MAR-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, IX 77030, USA

Submitted (11-MAR-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Direct Submission

Molecular and Human Genetics, Baylor College of Medicine, One Submitted (15-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, IX 77030, USA

ON Nov 15, 2002 this sequence version replaced gi:23681968.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.func.edu/projects/rat/). Each contig described assembly (a 'contig-scaffold'). Within each contig-scaffold, in the Atlas in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, by sized gaps filled with Ns to the estimated size. The sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome table.
Steimle, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, C., Taylor, T., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., V., Villasana, D., Waldron, L., Walker, B., Wang, J., Wang, C., Wang, S., Warren, J., Warren, R., Wei, K., Wei, K., White, F., Williams, G., Willson, R., Wleczyk, R., Wooden, H., Worley, K., Wright, D., Wright, R., Wu, J., Yakub, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhoo, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Prince, C., G., and Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tnc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Assembly program: Phrap, version 0.990329
Consensus quality: 173476 bases at least Q40
Consensus quality: 175237 bases at least Q30
Consensus quality: 176250 bases at least Q30
Estimated insert size: 172780; sum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
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Center code: BCM
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Unpublished
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Mus musculus clone RP24-216J21, WORKING DRAFT SEQUENCE, 7 unordered
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

    (bases 1 to 192539)

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Mus musculus, clone RP24-216J21
Unpublished
                                                                                                                                                                                                                                                                                                      end_sequence:BZ165180"
172198. .173628
/note="wgs_end_extension
clone_end:T7"
/db_xref="taxon:10116"
/clone="CH230-339N2"
915...1432
/note="chone boundary
clone_end:Spē
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54 GCTGCTGCTGCTGCTGCTTAA 80
                                                                                                                                                                   end_sequence:BZ165181"
133344. .133527
/note="clone_boundary
clone_end:T7
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Mus musculus (house mouse)
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AC132877
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AUTHORS
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KEYWORDS
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Kamat,A., Karatas,A., Kells,C., Landers,T., Levine,R.,
Lindblad-Toh,K., Liu,G., Lui,A., Mabbitt,R., MacLean,C.,
Macdonald,P., Major,J., Manning,J., Matthews,C., McCarthy,M.,
Meldfin,J., Meneus,L., Mihova,T., Minghy,T., Narphy,T., Naylor,J.,
Nguyen,C., Nicol,R., Norbu,C., O'Connor,T., O'Donnell,P.,
Nguyen,C., Oliver,J., Peterson,K., Phunkhang,P., Pierre,N.,
Rachupka,A., Ramasamy,U., Raymond,C., Retta,R., Rise,C., Rogov,P.,
Roman,J., Schauer,S., Schupback,R., Seaman,S., Severy,P.,
Spencer,B., Stange-Thomann,N., Stojanovic,N., Stubbs,M.,
Talamas,J., Treafaye,B., Theodore,J., Topham,K., Travers,M.,
Vasslilev,H., Venkataraman,V.S., Viel,R., Vo,A., Wilson,B., Wu,X.,
Wyman,D., Young,G., Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (12-MRR-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 12, 2003 this sequence version replaced gi:28412043.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOTE: This is a 'working draft' sequence. It currently consists of 7 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Quality coverage: 9.6 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
------ Project_Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center clone name: 216 J 21
------ Summary Statistics
Sequencing vector: Plasmid; n/a; 100% of reads
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/note="assembly_fragment"
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/clone="RP24-216J21"
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Birran,B. Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N.,
Anderson,S., Barna,N., Bastien,V., Bloom,T., Bogualavkiy,L.,
Boukigalter,B., Brown,A., Camacata,C., Campoplano,A., Chang,J.,
Chazaro,B., Choepel,Y., Colangelo,M., Collins,S., Collymore,A.,
Cook,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S.,
Faro,S., Ferreira,P., FitzHugh,W., Gagaga,D., Galagan,J., Gardyna,S.,
Ginde,S., Gord,S., Goyette,M., Graham,L., Garad-Pierre,N.,
Hagos,B., Horton,L., Hulme,W., Iliev,I., Johnson,R., Jones,C.,
Kamat,A., Karatas,A. Kells,C., Lakoguche,K., Lamazares,R.,
Landers,T., Lehoczky,J., Levine,R., Lindblad-Toh,K., Liu,G.,
MacCarthy,M., McDan,V., Muppy,T., Navion,C., Nicol,R.,
Norbu,C., Norman,C.H., O'Comnor,T., O'Donnell,P., O'Neil,D.,
Oliver,J., Peterson,Y., Phukhhang,P., Pierre,M., Pollara,V.,
Raymond,C., Retta,R., Ribeback,M., Riley,R., Rise,C., Rogov,P.,
Raymond,C., Retta,R., Ribeback,M., Santos,S., Schauer,S., Schauer,S., Schauer,S., Schauer,S., Schauer,S., Severy,P., Spencer,B., Stange-Thomann,N., Stojanovic,N.,
Strauss,N., Subramanian,A., Talanas,J., Tesfaye,S., Theodore,J.,
Viel,R., Vola,M., Milson,B., Wu,X., Wyman,D., Ye,W.J., Young,G.,
Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
Direct Submission
Libered Submission
Libese I to 192629
Birren,B., Nusbaum,C., Lander,E., Gardyna,S.,
Borallaw,L., Boukhgalter,B., Camarata,J., Chango,B.,
Research, 320 Charles Street, Cambridge, MA 02141, USA
Birren,B., Nusbaum,C., Lander,E., Corum,B., DeArellano,N.,
Boguslavkik,L., Boukhgalter,B., Camarata,J., Chango,B.,
Research, S., Pirzderale,M., Gage,D., Galagan,J., Gardyna,S.,
Renallaw,L., Grand-Pierre,N., Hafez,N., Hagopian,D., Hall,J., Horton,L., Hulme,W., Illey,I., Ohnson,R.,
Rand,J., Horton,L., Hulme,W., Illey,T., Levine,R.,
                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC118589 192629 bp DNA linear HTG 11-MAR-2003
Mus musculus clone RP23-198G19, WORKING DRAFT SEQUENCE, 6 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                5.8%; Score 27; DB 2; Length 192539;
100.0%; Pred. No. 0.0012;
ive 0; Mismatches 0; Indels 0;
                                          37139. 773158
/note="assembly_fragment"
73259. 134748
/note="assembly_fragment"
134849. 192539
                                                                                                                                                                                                                                                                                                                                                                                                                                                    93242 AACGCTGCTGCTGCTGCTGCTGCTGCT 93268
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                     note="assembly_fragment"
                                                                                                                                                                    'note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                     51 AACGCTGCTGCTGCTGCTGCT
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Mus musculus (house mouse)
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.37038
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                                                                                                                                                                                                      clone end:T7
                                                                                                                                                                                                                                                                                                                                                     27; Conservative
21234.
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Matches 27; Conserva
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AC118589
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Lindblad-Toh,K., Liu,G., Lui,A., Mabbitt,R., MacLean,C.,
Macdonald,P., Major,J., Manning,J., Matthews,C., McCarthy,M.,
Macdonald,P., Major,J., Manning,J., Matthews,C., McCarthy,M.,
Maldrim,J., Mencus,L., Mihova,T., Mlenga,V., Murphy,T., Naylor,J.,
O'Neil,D., Oliver,J., Peterson,K., Phunkhang,P., Pierre,N.,
Rachupka,A., Ramasamy,U., Raymon,K., Phunkhang,P., Pierre,N.,
Rachupka,A., Ramasamy,U., Raymon,G., Retta,R., Rise,C., Rogov,P.,
Roman,J., Schauer,S., Schupback,R., Semin,S., Severy,P., Smith,C.,
Spencer,B., Stange-Thomann,N., Stojanovic,N., Stubbs,M.,
Talamas,J., Tasefave,S., Theedore,J., Topham,K., Travers,M.,
Vassillev,H., Venkataraman,V.S., Viel,R., Vo,A., Wilson,B.,
Wyman,D., Young,G., Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
Direct Submission
Submitted (11-MRR-2003) Whitehead Institute/MIT Center for Genome
Research, 320 Charles Street, Cambridge, MA 02141, USA
On Mar 11, 2003 this sequence version replaced gi:24850527.
All repeats were identified using RepeatMasker.
Smit, A.F.A. & Green, P. (1997)
Http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
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Center clone name: 198 G 19

Sequencing vector: Plasmid; n/a; 100% of reads
Sequencing vector: Plasmid; n/a; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.960731
Consensus quality: 191534 bases at least Q40
Consensus quality: 191538 bases at least Q20
Insert size: 225000; agarose-fp
Insert size: 192129; sum-of-contigs
Quality coverage: 8.3 in Q20 bases; agarose-fp
Quality coverage: 9.7 in Q20 bases; sum-of-contigs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * NOTE: This is a 'working draft' sequence. It currently * consists of 6 contigs. The true order of the pieces * is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 117690: contig of 117690 bp in length 1691 117790: gap of 100 bp 118991: contig of 1201 bp in length 1892 119091: gap of 100 bp 1852 119091: gap of 100 bp 1852 129720: gap of 100 bp 187127: contig of 100 bp 187127: contig of 17470 bp in length 1728 147227: gap of 100 bp 186119: contig of 17407 bp in length 1320 186519: contig of 1760 bp 186519: contig of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: gap of 100 bp 186419: contig of 6210 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: sequence_submissions@genome.wi.mit.edu
----- Project_Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="RPCI-23 Female Mouse BAC"
1. .117690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center code: WIBR
Web site: http://www-seq.wi.mit.edu
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119092. .129620
/note="assembly_fragment"
129721. .147127
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/db_xref="taxon:10090"
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AL845432
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AL845432/c
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This sequence was finished as follows unless otherwise noted: all regions were either double-extranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, EMBL: Sw:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information on the WORMPEP database can be found at http://www.anger.ac.uk/Projects/C_elegans/wormpep RP23-273G23 is from the RPCI-23 Mouse BAC Library constructed by the group of pieter de Jong.

FOR further details see http://www.chori.org/bacpac/home.htm

VECTOR: PBACG2: Accession of Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Almertage.

Direct Submission
Submitted (21-MAY-2003) Wellcome Trust Sanger Institute, Hinxton, Submitted (21-MAY-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On May 22, 2003 this sequence version replaced gi:30842758.
Sequence from the Mouse Genome Sequencing Consortium whole genome shotgun may have been used to confirm this sequence. Sequence data from the whole genome shotgun alone has only been used where it has a phred quality of at least 30.
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Mouse DNA linear ROD 21-MAY-2003
Mouse DNA sequence from clone RP23-273G23 on chromosome 2, complete
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 194209)
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                             Length 192629;
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Pred. No. 0.0012;
/note="assembly_fragment"
147228. .186319
/note="assembly_fragment"
186420. .192629
/note="assembly_fragment"
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1. 194209
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                         53 CGCTGCTGCTGCTGCTGCTGCTTA 79
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                                                                                                                                                          vector_side:right"
                                                                                                                                                                                                               5.8%; Scur
100.0%; Pred
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                                                                                                                                 clone_end:T7
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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a PAC.

The sequence was an expensive an expensive and the assembly was confirmed by restriction digest, except on the rare
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (30-NOV-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Nov 29, 2002 this sequence version replaced gi:25137036.
Sequence from the Mouse Genome Sequencing Consortium whole genome shotgun may have been used to confirm this sequence. Sequence data from the whole genome shotgun alone has only been used where it has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Bm., BMBL, Pw., SMISSRROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP database can be found at the WORMPEP database can be found at the Ltp.//www.sanger.ac.uk/Projects/C elegans/wormpep RP23-332H19 is from the RPCI-23 Mouse PAC Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata, Vertebrata, Euteleostomi,
Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          constructed by the group of Pieter de Jong.
For further details see http://www.chori.org/bacpac/home.htm
VECTOR: pBACC3.6.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                   Length 194209;
                                                                                                                                                                                                                                                        5.8%; Score 27; DB 10; Length 19. 100.0%; Pred. No. 0.0012; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center: Wellcome Trust Sanger Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                           Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                     51 AACGCTGCTGCTGCTGCTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a phred quality of at least 30.
                                                                                                              /clone="RP23-273G23"
/clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -- Genome Center
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:25955789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 195835)
                                                                                                                                                                                                                                                                                          1 Similarity 100.
27; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center code: SC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL845432.7
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DEFINITION

ACCESSION VERSION KEYWORDS SOURCE

RESULT 41

AC124555

ORGANISM

AUTHORS TITLE JOURNAL

REFERENCE AUTHORS

JOURNAL

REFERENCE

TITLE JOURNAL

COMMENT

AUTHORS TITLE JOURNAL REFERENCE

REFERENCE

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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with colly a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such one plasmid subclone or more than one M13 subclone, and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em: EMBL; Sw:, SWISSEROT; Tr:, TREMBL; WD.; WORMPEP; Information on the WORMPEP that.
                                   AL603682 21680 bp DNA linear ROD 24-OCT-2002 Mouse DNA sequence from clone RP23-235J5 on chromosome 11, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse DNA sequence from clone RP23-421F23 on chromosome 11, AL604024.7 GI:21211848
                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 211680)
Hopkins, B.
                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (23-OCT-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Oct 25, 2002 this sequence version replaced gi:21952987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-235J5 is from the RPCI-23 Mouse PAC Library constructed by the group of Pieter de Jong.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          For further details see http://www.chori.org/bacpac/home.htm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 211680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.8%; Score 27; DB 10; Length 21
100.0%; Pred. No. 0.0012;
Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25943 AACGCTGCTGCTGCTGCTGCTGCT 25969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center code: SC
Web Site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51 AACGCTGCTGCTGCTGCTGCTGCT 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="RP23-235J5"
clone="RP23-235J5"
clone lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VECTOR: pBACe3.6.
Location/Qualifiers
1. .211680
                                                                                                                                                                               Mus musculus (house mouse)
Mus musculus
                                                                                                                                  AL603682.36 GI:24394858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 27; Conservative
                                                                                  sequence.
                                LOCUS
DEFINITION
                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                    ACCESSION
                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                     AUTHORS
            AL603682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
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Whorberson, J. D. and Waterston, R.H.

Direct Submission
Submitted (14-JUN-2002) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
Wilson, R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (20-JUN-2003) Genome Sequencing Center, 4444 Forest Park Parkway, St. Louis, MO 63108, USA.
4 (basel to 210174)
Wilson,R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submitted (08-NOV-2003) Genome Sequencing Center, 4444 Forest Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 210174)
                                                                                                                                                                                                                                                                                                                                                                            AC124555 210174 bp DNA linear ROD 08-NOV-2
Mus musculus chromosome 14 clone RP23-245K17, complete sequence.
AC124555
                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Parkway, St. Louis, MO 63108, USA
On Nov 8, 2003 this sequence version replaced gi:31880269
                                                                                                                                                                             0;
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0
                                                                                                                           Length 195835;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center: Washington University Genome Sequencing Center
                                                                                                                                                                        0; Indels
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                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center code: WUGSC
Web site:http://genome.wustl.edu
Contact: submissions@watson.wustl.edu
                                                                                                                 5.8%; Score 27; DB 100.0%; Pred. No. 0.0 tive 0; Mismatches
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                                                                                                                                                                                                                                              38844 AACGCTGCTGCTGCTGCTGCTGCT 38818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence of Mus musculus clone Unpublished
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                                                                                                                                                                                                                51 AACGCTGCTGCTGCTGCTGCTGCT 77

    .210174
    /organism="Mus musculus"

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/chromosome="2"
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/clone_lib="RPC1-23"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC124555.4 GI:38229416
                                                                                                           Query Match
Best Local Similarity 100.0
Matches 27, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson, R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
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Gaps

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Query Match

ORIGIN

FEATURES

Matches

ਨੇ q RESULT 42

seq29-na-truncated.olig10.rge

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Submitted (13-SEP-2002) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
                                                                                                                                               On Sep 13, 2002 this sequence version replaced gi:21105051.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NOTE: This is a 'working draft' sequence. It currently consists of 16 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                Center: Washington University Genome Sequencing Center
Center code: WUGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chemistry: Dye-primer ET; 0% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.990319
Consensus quality: 230599 bases at least Q40
Consensus quality: 231829 bases at least Q20
Consensus quality: 232818 bases at least Q20
Insert size: 213000; agarose-fp
Insert size: 236815; sum-of-contigs
Quality coverage: 10.72 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 46158 bp in length
unknown length
of 53114 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                 ---- Summary Statistics -----
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bp in length
length
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of 19878 bp in length
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of 31206 bp in length
unknown length
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                                                                                                                                                                                                                                                                                      Web site:http://genome.wustl.edu/gsc/index.shtml
Contact: submissions@watson.wustl.edu
--------- Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig of 1799 bp in length
gap of unknown length
contig of 1492 bp in length
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unknown length
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bp in length
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bp in length
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bp in length
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of 8883 b
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              3 (bases 1 to 237094)
McPherson, J.D. and Waterston, R.H.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequencing vector: M13; 0%
Sequencing vector: plasmid; 100%
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/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                       Center project name: M_BA0116001
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                                     AUTHORS
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                                                                                                                                                     COMMENT
                                                                                                                                                                                     Submitted (12-MAY-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery/sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On MAY 25, 2002 this sequence version replaced gi:18477353.
During sequence assembly data is compared from overlapping clones.
Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the overlapping clone name. Note that the corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.
This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one MIS subclone; and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, GARLSPROT: Tr:, TREMBL; WP:, WORWPEP; Information on the WORMPEP database can be found at
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Submitted (31-MAR-2002) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-421F23 is from the RPCI-23 Mouse PAC Library constructed by the group of Pieter de Jong.

For further details see http://www.chori.org/bacpac/home.htm
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
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Mus musculus chromosome UNK clone RP23-11601, WORKING DRAFT
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ACI16661.3 GI:22830524
HTG; HTGS_PHASE1; HTGS_FULLTOP
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McPherson, J.D. and Waterston, R.H.
The sequence of Mus musculus clone
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McPherson, J.D. and Waterston, R.H.
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/db_xref="taxon:10090"
/chromosome="11"
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/clone_lib="RPCI-23"
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     Mus musculus (house mouse)
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                                                                                                             (bases 1 to 217278)
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Best Local Similarity 100..
                                                                                                                                                                      Direct Submission
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AC131846 237332 bp DNA linear HTG 13-MAY-2003
Rattus norvegicus clone CH230-227F3, WORKING DRAFT SEQUENCE, 3
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOD.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                           /note="assembly_name:Contig52"
24514. .32872
.7.note="assembly_name:Contig53"
32973. .41855
/note="assembly_name:Contig54"
41956. .55393
footed-inspective in the contig55"
canal result in the contig55"
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/note="assembly_name:Contig57"
/note="assembly_name:Contig58"
/137488. .183645*
/note="assembly_name:Contig59"
/note="assembly_name:Contig59"
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5.8%; Score 27; DB 2; I
Best Local Similarity 100.0%; Pred. No. 0.0012;
Matches 27; Conservative 0; Mismatches 0;
                                                                                                     3492. .4734
/note="assembly_name:Contig48"
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                                                                 .900. .3391
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                                         'note="assembly_name:Contig46"
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note="assembly_name:Contig51"
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clone="RP23-11601"
                                                                                                                                                                                                                                                                      vector side:right"
                                                                                                                                                                                                                                                 clone end:T7
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Eggin, M., Escotto, M., Engag, N., Falls, T., Fan, G., Farsander, S., Finley, M., Flagg, N., Forbes, L., Foster, M., Foster, P., Fraser, C.M., Gabisi, A., Ganta, R., Garcia, A., Garner, T., Gearza, M., Ganzader, G., Garza, M., Ganzader, G., Garza, M., Ganzader, G., Garza, M., Ganzader, P., Ganzader, G., Garza, M., Ganzader, P., Hadand, W., Hamil, C., Hamilton, C., Hamilton, K., Handerson, N., Harnandez, J., Hames, P., Hawes, A., Henderson, N., Hernandez, J., Jackson, L., Jackson, R., Hollins, S., Huyk, S., Kelly, S., Khan, Z., King, L., Kovar, C., Karpathy, S., Kelly, S., Kelly, S., Khan, Z., Lowis, L., Lobow, H., Levan, J., Lewis, L., Liu, Y., Loulsegd, H., Lozado, R.J., Lu, X., Mar, J., Liu, Y., Liu, W., Liu, Y., Loulsegd, H., Lozado, R.J., Lu, X., Mar, J., Mar, J., Liu, Y., Liu, W., Liu, Y., Loulsegd, H., Lozado, R.J., Lu, X., Mar, J., Mar, J., Mangum, B., Mahindartne, M., Mahndow, M., Martin, K., Martin, K., Martin, R., Martin, K., Martin, R., Martin, R., Martin, R., Martin, R., Marker, S., Koris, S., Morded, M.P., Morris, S., Morded, M.P., Morris, S., Morden, P., Netton, N., Nguyen, N., Norris, S., Nordelemeh, O., Okwuon, G., Olarnpunsagoon, A., Pal, S., Parks, K., Reilly, M., Ren, Y., Renter, M., Richards, S., Riggs, F., Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruis, S., Riggs, F., Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruis, S., Shen, H., Shetty, J., Shvartsbeyn, A., Sisson, I., Siteor, E., Wallson, R., Shen, H., Shetty, J., Shvartsbeyn, A., Sisson, I., Shett, C.D., Smafs, D., Warten, R., Sodersten, R., Wu, J., Yakub, S., Yon, U., Yu, F., Zhang, J., Zhou, Y., Zhao, S., Yon, W., Williams, G., Willson, R., Smith, D., Williams, G., Millson, R., Smith, D., Williams, G., and Gibbs, R.A., Shao, J., Yon, V., Yu, 
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Submitted (13-MMY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On May 13, 2003 this sequence version replaced gi:23606053.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bmc.imc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas sassembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
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Submitted (26-AUG-2002) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 237332)
Rat Genome Sequencing Consortium.
Escotto, M., Eugene, C., Evans, C.A., Falls, T., Fan, G.
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Center project Information Center project name: GLLQ Center clone name: CH230-227F3 Contact: hgsc-help@bcm.tmc.edu

Center code: BCM

32

seq29-na-truncated.olig10.rge

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TITLE
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                                                                                                                                                                NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently consists of a contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae;
Assembly program: Atlas 3.0;
Consensus quality: 2010099 bases at least Q40
Consensus quality: 207416 bases at least Q30
Consensus quality: 210446 bases at least Q30
Estimated insert size: 213682; sum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
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HTG; HTGS_PHASE1; HTGS_BRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
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clone_end:T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  end sequence:BZ104009"
8193. 8812
'hote="clone boundary
clone end:T7
site:EcoRI
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/db_xref="taxon:10116"
/clone="CH230-227F3"
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63361. .65231
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/note="clone_boundary
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site:EcoRI
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Chacko,J., Chavez,D., Chen,G., Chen,R., Chen,Y., Chen,Z., Chu,J., Cleviand,C., Cookrell,R., Cox,C. (Coyle,M., Cree,A. D'Suoza,L., Davila,M.L., Davis,C., Davy-Carroll,L., De Ands,C., Dederich,D., Davila,M.L., Davis,C., Davy-Carroll,L., De Ands,C., Dederich,D., Dropgan-Rocha,S., Deramo,C., Ding,Y., Dinh,H., Divya,K., Draper,H., Dayya,K., Eggan,A., Bacetco,M., Fagene,C., Forener,T., Forter,M., Foster,P., Farser,C.M., Gabrer,M., Garcia,A., Garcia,A., Garcia,A., Garcia,A., Garcia,A., Garcia,M., Kara,M., Kara,M., Kara,M., Kara,M., Kara,M., Kara,M., Kara,M., Kara,M., Kara,M., Martin,R., Martin,
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3 (bases 1 to 240501)

5 Rat Genome Sequencing Consortium.

Direct Submission

5 Submitted (10-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor plaza, Houston, TX 77030, USA

6 Molecular and Human Genetics, Baylor College of Medicine, One Baylor plaza, Houston, TX 77030, USA

7 May 10, 2003 this sequence version replaced gi:25095914.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.ed/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-seaffold'). Within each contig-seaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence may at 11 be indicated in the feature
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Unpublished
2 (bases 1 to 240501)
Worley.K.C.
Direct Submission
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Web site: http://www.hgsc.bcm.tmc.edu/

Center code: BCM

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Allen, H., Alsbrooks, S., Amin, A., Anguiano, D.,
Allen, H., Aoyagi, A., Ayodeji, M., Baca, E., Baden, H.,
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Cleveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D'Souza, I.,
Davila, M. L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D.,
Delgado, O., Denson, S., Dermon, C., Ding, Y., Dinh, H., Divya, K.,
Draper, H., Dugan-Rocha, S., Dunn, A., Durbin, K., Duva, Is., Eaves, K.,
Escotto, M., Escotto, M., Eugene, C., Evans, C., A., Falls, T., Fan, G.,
Fernandez, S., Finley, M., Flangy, N., Forbes, I., Foster, P.,
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Gebregeorgis, E., Geer, K., Gill, R., Grady, M., Guerra, W.,
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NOTE: This is a 'working draft' sequence It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as arbitrary. Gaps between the contigs are represented as Trus of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
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Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                           Consensus quality: 227593 bases at least Q40 consensus quality: 227593 bases at least Q30 consensus quality: 229405 bases at least Q30 consensus quality: 230440 bases at least Q30 Estimated insert size: 236821; sum-of-contigs estimation Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1238878: contig of 238878 bp in length 8879 238978: gap of unknown length 8979 240501: contig of 1523 bp in length. Location/Qualifiers 1. 240501 | /organism="Rattus norvegicus" / mol_type="genomic DNA" / mol_type="genomic DNA" / clone="CH230-132D18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC129456.5 GI:24940997
HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47005 AACGCTGCTGCTGCTGCTGCTGCT
                                                                                     Center clone name: CH230-132D18
Contact: hgsc-help@bcm.tmc.edu
                         Information
                                                                                                                  Assembly program: Atlas 3.0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51 AACGCTGCTGCTGCTGCTGCTGCT 77
                         Center project Information Center Conject name: GHBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="wgs contig"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          be preserved.
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238879
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AC129456/c
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ORGANISM
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VERSION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
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Direct Submission

Direct Submission

Direct Submission

Submitted (13-NOV-2002) Human Genome Sequencing Center, Department
Submitted (13-NOV-2002) Human Genetics, Baylor College of Medicine, One

Baylor Plaza, Houston, TX 77030, USA

Daylor Plaza, Houston, TX 77030, USA

ON Nov 13, 2002 this sequence version replaced gi:23096544.

On Nov 13, 2002 this sequence version replaced gi:23096544.

On Nov 13, 2002 this sequence version replaced gi:23096544.

On Nov 13, 2002 this sequence version replaced gi:23096544.

On Nov 13, 2002 this sequence version replaced gi:23096544.

On Nov 13, 2002 this sequency examply is a combination of BAC based reads

and whole genome shotgun sequencing reads assembled using Atlas

(http://www.hgsc.bom.tmc.edu/projects/rat/). Bach contig described

in the feature table below represents a scaffold in the featured

individual sequence contigs are ordered and criented, and separated

by sized gaps filled with Ns to the estimated size. The sequence

may extend beyond the ends of the clone and there may be sequence

contigs within a contig-scaffold that consist entirely of whole

contigs within a contigs scaffold that consist entirely of whole

genome shotgun sequence reads. Both end sequences and whole genome

shotgun sequence only contigs will be indicated in the feature

table.
Gunaratne, P., Haaland, W., Hamil, C., Hamilton, C., Hamilton, K., Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, M., Hines, S., Hladun, S.L., Hodgson, A., Hoguson, R., Jonson, R., Jokkson, L., Jacobl., Jiang, H., Johnson, B., Johnson, R., Jolivet, A., Yacher, Y., Kelly, S., Khaly, S., Khan, J., Khaly, L., Kovar, C., Kraft, C.L., London, P., Longorce, S., Lopez, J., Liu, M., Liu, Y., London, P., Longorce, S., Lopez, J., Liu, M., Mahindartne, M., Mahmoud, M., Malloy, K., Martin, R., Martinez, E., Mahmen, P., Morris, C., Martinez, E., Mahmen, P., Morris, C., Martinez, E., Mandum, D., Morris, C., Martin, R., Martinez, E., Mandun, P., Morris, C., Martin, R., Martinez, E., Mandun, W., Orris, C., Martin, R., Martinez, E., Mandun, S., Mandod, M. P., Morris, S., Mundardar, M., Norris, S., Mundardar, S., Mandun, Morris, S., Mundardar, M., Sartenak, S., Paul, H., Perz, A., Perzer, L., Perankoch, C., Reilly, B., Reilly, M., Ren, Y., Reuter, M., Rose, R., Reilly, R., Railly, M., Ren, Y., Reuter, M., Rose, R., Reilly, R., Savery, G., Scherer, S., Sorelle, R., Sodergren, E., Song, X.-Z., Sorelle, R., Sodergren, E., Sung, X.-Z., Sorelle, R., Sodergren, R., Strong, M., Trejos, Z., Usmai, K., Valas, R., Vera, V., Villasana, D., Walren, M., Warren, J., Warren, J., Wang, S., Warren, J., Wang, S., Wang, S., Warren, J., Wang, S., Wangh, S., Wang, S., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Morley, K.C.
Direct Submission
Direct Submission
Submitted (30-JUL-2002) Human Genome Sequencing Center, Department Submitted (30-JUL-2002) Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 240561)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center clone name: CH230-9K8

Assembly program: Phrap; version 0.990329

Consenus quality: 212559 bases at least Q40

Consensus quality: 214527 bases at least Q20

Consensus quality: 215680 bases at least Q20
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Contact: hgsc-help@bcm.tmc.edu
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Center code: BCM
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Submitted (26-AUG-2001) Whitehead Institute/MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Whitehead Institute/ MIT Center for Genome Research
Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G.,
J., Zembek,L., Zimmer,A. and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 242978;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46051: contig of 46051 bp in length
46151: gap of 100 bp
48744: contig of 2593 bp in length
48644: gap of 100 bp
168635: contig of 119791 bp in length
168735: gap of 100 bp
242978: contig of 74243 bp in length.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="RP23-61L24"
/clone_lib="RPCI-23 Female Mouse BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.8%; Score 27; DB 2; I
100.0%; Pred. No. 0.0012;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center code: WIBR
Web site: http://www-seg.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /chromosome="13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                            Zainoun,J., Zembek
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 27; Conserve
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46152
48745
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168636
168736
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                               TITLE
JOURNAL
                                                                                                                  REFERENCE
AUTHORS
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2 (bases 1 to 242978)

Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N.,
Anderson, S., Barna, N., Bastian, V., Boguslavkiy, L., Boukhgalter, B.,
Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B.,
Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A.,
Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S.,
Ferreira, P., Firzhugh, W., Gage, D., Galagan, J., Gardha, S.,
Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Plerre, N.,
Hagos, B., Heaford, A., Horton, L., Hulme, W., Iliev, I., Johnson, R.,
Jones, C., Kamat, A., Karatas, A., Kells, C., Lakocque, K.,
Landers, T., Lehoczky, J., Levine, R., Liu, G.,
Maclean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C.,
McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J.,
Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D.,
Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V.,
Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P.,
Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P.,
Raymond, C., Severy, P., Spencery, B., Stange-Thomann, N., Stolyaback, N.,
Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J.,
Topham, K., Travers, M., Travis, N., Trigilio, J., Vassiliev, H.,
                                                                * NOTE: Estimated insert size may differ from sequence length

* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a 'working draft' sequence. It currently

* consists of 1 contigs. Gaps between the contigs.

* are represented as runs of N. The order of the pieces

* are represented to be correct as given, however the sizes

* of the gaps between them are based on estimates that have

* provided by the submittor.

* This sequence will be replaced

* by the finished sequence as soon as it is available and

* the accession number will be preserved.

* Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTG 12-DEC-2003
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1. (bases 1 to 242978)
       Estimated insert size: 218439; sum-of-contigs estimation Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 240561;
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Mus musculus chromosome 13 clone RP23-61L24 map 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 27; DB 2; Length 240.
Pred. No. 0.0012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS PHASE1; HTGS FULLTOP; HTGS_ACTIVEFIN.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Birren,B., Nusbaum,C. and Lander,E.
Mus musculus chromosome 13, clone RP23-61L24
                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus norvegicus"
/mol_type="genomic DNA"
/db_xref="taxon:10116"
/clone="CH230-9K8"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IN PROGRESS ***, 4 unordered pieces.
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/note="wgs_contig"
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Best Local Similarity 100.0
Matches 27; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
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AUTHORS
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KEYWORDS
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246532. .249334
/note="wgs_end_extension
clone_end:Sp6"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nurny, D.Marie., Merzker, M.Lee., Abramzon, S., Adams, C., Alder, J., Anyalabarooks, S., Amin, A. Angulahoo, D., Anyalabarooks, S., Amin, A. Angulahoo, D., Anyalabarooks, S., Amin, A. Angulahoo, D., Anyalabarooks, S., Amin, M., Baca, E., Baden, H., Baldwin, D., Bandaranake, D., Barbock, M., Barntered, M., Benahmed, F., Biswalo, K., Blayt, T., Blankenburg, K., Blyth, P., Brown, M., Bhay, C., Blankenburg, K., Blyth, P., Brown, M., Calderon, E., Cardena, V., Carter, K., Carderon, E., Cardena, V., Carter, K., Canas, D., Chen, Z., Chen
                                                                                                                                            ACL25/23 250546 bp DNA linear HTG 09-MAY-2003 Rattus norvegicus clone CH230-6D11, WORKING DRAFT SEQUENCE, 2 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (29-JUN-2002) Human Genome Sequencing Center, Department
                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                       HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                           199395 AACGCTGCTGCTGCTGCTGCTGCT 199421
AC125723
AC125723.5 GI:30467499
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2 (bases 1 to 250546)
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TITLE
JOURNAL
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All Submitted (09-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On May 9, 2003 this sequence version replaced gi:24818284.

On May 9, 2003 this sequence version replaced gi:24818284.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.lcm.edu/projecs/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/doos/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Assembly program: Atlas;

Consensus quality: 223239 bases at least Q40
Consensus quality: 226328 bases at least Q30
Consensus quality: 228394 bases at least Q20
Estimated insert size: 233947; sum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases 1 to 250546)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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/mol_type="genomic DNA"
/db_xref="taxon:10116"
/clone="CH230-6D11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center project name: GBXY
Center clone name: CH230-6D11
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/note="wgs end extension
clone_end:T7"
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186843. .227017
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Unpublished
2 (bases 1 to 258061)
Worley, K.C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Marzhy, Dandare, Mezker, M.Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Anyalebechi, V., Aoyagi, A., Ayodeji, M., Baca, E., Baden, H., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Anyalebechi, V., Denderia, V., Boderia, M., Banatread, M., Benahmed, F., Biswalo, K., Balder, M., Baratread, M., Benahmed, F., Biswalo, K., Blatt, J., Blankenburg, K., Blyth, P., Brown, M., Benahmed, F., Biswalo, K., Carter, Y., Carter, C., Corkell, T., Chen, T., Chu, J., Creveland, C., Cockrell, T., Cardaron, E., Chen, C., Cockrell, T., Chard, C., Dard, C., Ding, Y., Dinh, H., Diyan-Rocha, S., Dum, A., Durbin, K., Duval, B., Baves, K., Brank, L., Dugan-Rocha, S., Dum, A., Durbin, K., Duval, B., Eaves, K., Eraser, C. M., Gabisi, A., Ganta, R., Garner, T., Faraser, C. M., Gabisi, A., Ganta, R., Garner, T., Faraser, C. M., Gabisi, A., Ganta, R., Garner, M., Herrandez, S., Filly, M., Flady, M., Guera, M., Herrandez, B., Havel, B., Hawes, A., Handiton, C., Hamilton, C., Handler, B., Havells, S., Handin, S.L., Hodgoon, A., Herrandez, R., Hines, S., Handin, S.L., Hodgoon, R., Handler, D., Jang, H., Mantin, K., Martin, K., Martin, K., Martin, R., Martin, E.,                                                                                       ..
                                                                                                                                                                                                                                                                                                                                          AC128474 258061 bp DNA linear HTG 21-SEP-2002 Rattus norvegicus clone CH230-51A3, *** SEQUENCING IN PROGRESS ***.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                       Gaps
                                                                                 ;
0
                     5.8%; Score 27; DB 2; Length 250546;
100.0%; Pred. No. 0.0012;
ive 0; Mismatches 0; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                           AC128474.2 GI:23265072
HTGS, HTGS, HTASE2; HTGS DRAFT, HTGS_ENRICHED.
Rattus norvegicus
Rattus norvegicus
                                                                                                                                                                              54 GCTGCTGCTGCTGCTGCTTAA 80
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                     Query Match
Best Local Similarity 100.
Matches 27; Conservative
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ACCESSION
VERSION
KEYWORDS
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AC128474
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TITLE

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Submitted (21-SEP-2002) Human Genome Sequencing Center, Department of Molecular and Human Geneiics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
On Sep 21, 2002 this sequence version replaced gi:21909191.

The sequence in this assembly is a combination of BAC based reads and whole genome shortyun sequency reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). As a result, the sequence may extend beyond the ends of the clone and there may be contigs that consist entirely of whole genome shorgun sequence reads. Both end sequences and whole genome shorgun sequence only contigs will be indicated in the feature table.
Submitted (19-JUL-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * NOTE: Estimated insert size may differ from sequence length
* NoTE: this sequence may represent more than one clone.
* NOTE: This is a 'working draft' sequence. It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Assembly program: Phrap, version 0.990329
Consensus quality: 237914 bases at least Q40
Consensus quality: 240542 bases at least Q30
Consensus quality: 242364 bases at least Q30
Consensus quality: 242364 bases at least Q30
Estimated insert size: 255476; sum-of-contigs estimation
Quality coverage: 4x in Q20 bases; sum-of-contigs estimation
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This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

258061: contig of 258061 bp in length.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Center clone name: CH230-51A3
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256785. .258061
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clone_end:Sp6"

    1429
    note="wgs_end_extension"

                                                                                                                                                Rat Genome Sequencing Consortium
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Query Match 5.8%; Score 27; DB 2; Length 258061; Best Local Similarity 100.0%; Pred. No. 0.0012; Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps

0;

Dp

Search completed: May 25, 2004, 18:30:57 Job time : 3357 secs